serena™

Edition 2.0

SERENA® CHANGEMAN® DIMENSIONS™

USER'S GUIDE

Table of Contents

6 Table of Contents

12 Comparing and Merging Projects. 387

Welcome to Dimensions

Thank you for choosing the Serena® ChangeMan® Dimensions™® product, a powerful process management and change control system that will revolutionize the way you develop software. Dimensions helps you organize, manage, and protect your software development projects on every level—from storing and tracking changes to individual files, to managing and monitoring an entire development cycle.

Purpose of this manual

This manual is a user guide to the Dimensions Client Tools. These provide an interface to Dimensions for networking environments containing a server node and client nodes. These tools are:

■ The Dimensions web client for accessing a Dimensions Database using a web browser on various platforms.

■ The Dimensions desktop client for accessing a Dimensions Database using a Windows PC.

■ The Dimensions Project Merge Tool for merging and comparing Dimensions workset directories and local file directories.

■ The Serena ChangeMan Merge Tool for merging and comparing the contents of Dimensions item files and local files.

This user guide enables an end user to:

■ Understand the basics behind Dimensions and how to use the functions available in the client tools.

■ Start using the major subsystems of Dimensions using the web client and desktop client, such as version management and change tracking.

■ Set up, configure, and customize the client tools for their own use.

■ Understand the concepts behind comparing and merging projects and files that have been developed in parallel and use the Dimensions tools for these purposes.

For more information

Refer to the *Serena ChangeMan Dimensions Getting Started Guide* for a description of the Dimensions documentation set, a summary of the ways to work with Dimensions, and instructions for accessing the Online Help.

Refer to the *Installation Guide* for information on how to install the Dimensions client tools.

Edition status

This is Edition 2.0 of the *Serena ChangeMan Dimensions User's Guide.* The information in this edition applies to *Release 9.1.0* of Serena *Dimensions* or later. This edition supersedes earlier editions of the separate *Dimensions* user's guides that described the web client, desktop client, and the merge tools.

Typographical Conventions

The following typographical conventions are used in the online manuals and online help. These typographical conventions are used to assist you when using the documentation; they are not meant to contradict or change any standard use of typographical conventions in the various product components or the host operating system.

Convention	Explanation
italics	Introduces new terms that you may not be familiar with and occasionally indicates emphasis.
bold	Emphasizes important information and field names.

Convention	Explanation
UPPERCASE	Indicates keys or key combinations that you can use. For example, press the ENTER key.
`monospace`	Indicates syntax examples, values that you specify, or results that you receive.
`monospaced italics`	Indicates names that are placeholders for values you specify; for example, *`filename`*.
`monospace bold`	Indicates the results of an executed command.
vertical rule |	Separates menus and their associated commands. For example, select File | Copy means to select Copy from the File menu.
	Also, indicates mutually exclusive choices in a command syntax line.
brackets []	Indicates optional items. For example, in the following statement: `SELECT [DISTINCT]`, DISTINCT is an optional keyword.
. . .	Indicates command arguments that can have more than one value.

Printing Manuals

As part of your Dimensions license agreement, you may print and distribute as many copies of the Serena ChangeMan Dimensions manuals as needed.

Ordering Media Kits

Dimensions can either be purchased as a media kit or by downloading it directly from the Serena web site.

The media kit comprises:

- Dimensions server/client CDs.
- Documentation CD.
- ChangeMan Builder for Dimensions CD.
- Dimensions for Visual Studio CD.
- Installation Guide.
- Getting Started Guide.
- Serena Licensing for Dimensions Quick Start.
- Oracle Runtime DVD or CD (optional).
- Dimensions for z/OS CD (optional).

To order initial (download customers) or additional copies of this media kit, please contact your sales representative for assistance.

Contacting Technical Support

Serena provides technical support for all registered users of this product, including limited installation support for the first 30 days. If you need support after that time, contact Serena Online Services at the following URL and follow the instructions:

http://support.serena.com/

Language-specific technical support is available during local business hours. For all other hours, technical support is provided in English.

The Serena Online Services web page can also be used to:

- Report problems and ask questions.

■   Obtain up-to-date technical support information, including that shared by our customers via the Web, automatic E-mail notification, newsgroups, and regional user groups.

■   Access a knowledge base, which contains how-to information and allows you to search on keywords for technical bulletins.

■   Download fix releases for your Serena products.

1   About Dimensions

In this Chapter

About the Process Model

In Dimensions, the *process model* is a set of user-defined controls that govern the design, development, and maintenance of a product. The process model incorporates your company's change, version, process, and build policies in order to regulate and improve your development environment. These policies encompass:

- **Change Management:** Tracks which components must change to resolve a problem or complete a task, and identifies responsible team members.

- **Version Management:** Stores and tracks changes to product components.

- **Process Management:** Directs the movement of product components through their lifecycles.

- **Build and Release Management:** Captures configurations of item revisions for software builds, project milestones, and releases to customers.

Diagram: Combining Management Policies
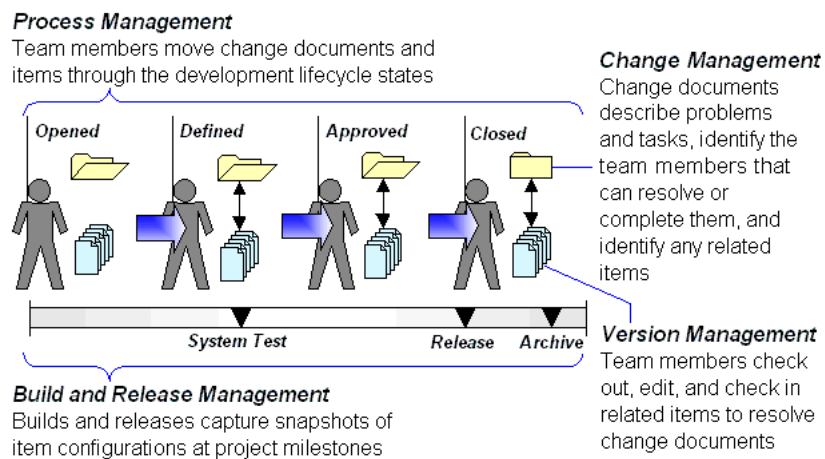
Dimensions Benefits

Serena® ChangeMan® Dimensions™ is the world's most flexible, scalable, and comprehensive change management platform. Dimensions provides the framework for enforcement and ongoing improvement in business rules, development processes, and asset change practices. Ideal for collaborative team environments and distributed groups, Dimensions provides—in a single change management framework—comprehensive process control, versioning, baseline management, issue management, release management, next-generation build management, and workflow management. Dimensions rapidly adapts to existing infrastructures and delivers powerful process control that can be easily customized to fit agile or traditional methodologies, or modeled on specific needs. Leveraging the Dimensions platform, organizations can reduce costs, increase productivity, and better manage their technology initiatives to meet business objectives and regulatory or audit requirements.

Dimensions Features

The Dimensions product portfolio provides a complete software configuration management solution. While other configuration management vendors only provide standalone versions or change control solutions, Serena delivers a set of products conceived, designed, implemented, and released together.

The Dimensions products address the following areas:

- **Definition of the Process Model:** This consists of defining Dimensions object types such as items, change documents etc. and the procedures, rules, and authorization governing their use. These are discussed in the Process Modeling User's Guide.

- **Administration Functions:** Setting up database and networking access for distributed users and platforms. This is discussed in the *Tool Administration Guide*.

- **Distributed Engineering:** Working across local area and wide area networks, including shadowing facilities. This is discussed in the *Distributed Development Guide*

- **Using Dimensions with Integrated Development Environments:** Setting up and using Dimensions so that you can access the database from within various development tools. This is described in the *Development Interface Implementation Guide*.

- **Command-Line Interface:** Access the Dimensions database using command-line instructions as an alternative to the GUI interfaces provided. This is described in the *Command-Line Reference Guide*.

- **Version, Change, Build and Release Management:** Using Dimensions to control development, track changes, record and release versions of your product to customers. These functions are discussed in this guide.

About the Dimensions User Interfaces

In addition to a comprehensive command-line interface, a developer's toolkit interface, and integration into your preferred integrated development environment (IDE), Dimensions offers two client interfaces that you can use to perform SCM tasks. This guide focuses on the web client and desktop client.

- **Web client:** The Dimensions web client allows you to access a Dimensions database via the Internet or an intranet. With the Dimensions web client, you can use your web browser to view and update detailed information about your change documents, items and baselines, as well as perform tasks such as checking in and checking out item revisions and managing change documents all from within your development process.

  Because the web client allows you to access products from a connected point on the Internet or an intranet, it is ideally

suited for remote users, mobile users, and users in web-intensive environments, such as members of Internet programming and content development teams. In addition, the lightweight web browser interface offers the benefits of low-cost maintenance for users in all environments.

■ **Desktop client:** The Dimensions desktop client runs on IBM-compatible PCs under the Microsoft Windows operating systems. The desktop client is based on a client-server technology. This technology provides secure, seamless client-access from a PC to a Dimensions server using TCP/IP.

Web Tasks vs. Desktop Tasks

The following table compares the tasks you can perform using the web client and desktop client:

Tasks	Web client	Desktop client
Keep track of your Pending lists	✔	✔
Create, modify, and action items	✔	✔
Check item revisions in and out.	✔	✔
Create, modify, and action change documents	✔	✔
Upload files from a directory structure on disk to update a Dimensions workset structure.	✔	
Create and manage worksets	✔	✔
Create and manage baselines	✔	✔
Create and manage releases and customers	✔	✔

Tasks	Web client	Desktop client
Create and manage design parts		✔
Compare or merge item revisions from two or more projects.		✔
Compare and merge the content of item files and/or files on disk	✔	✔
Request user-defined reports	✔	✔

About Product Organization

Products and Design Parts

Practically any activity that has an objective and requires coordinated and monitored interaction can be mapped onto the top-level Dimensions *object* type called a *product*. Products provide the context for managing development with Dimensions.

Every object, for example, source files, change requests, and entire configurations, belongs to a product. Dimensions provides comprehensive version management, change/defect tracking, build, baselining, and release functions for the objects belonging to a product.

To represent how a product is organized, both from a management and technical perspective, Dimensions models the *design structure* of a product as a set of related *design parts*. Design parts are logical groupings of objects such as modules of code, specifications, and change documents.

Each design part represents a conceptual component of the system. These are organized into a product by defining relationships between them. Grouping items within a meaningful design part structure makes it easier for people to understand how things fit together and what role they have to play in the success of the work project.

Each design part owns a set of *items* associated with that part of the product. Items are objects that represent the physical implementation of product components, such as functional specification documents, test specifications, source code files, test data, and class libraries. Items, like design parts, can be used by design parts other than their owner. They can also be related to each other in various ways.

For more information about setting up products and top-level design parts, see the Process Modeling User's Guide.

For more information about managing design parts, see Chapter 6, "Managing Design Parts."

Worksets

A *workset* is a collection of item revisions that are relevant to a development activity. Examples include mainstream, customization, and maintenance development. Worksets enable major development activities to occur in parallel without conflict. For example, by using different worksets, customization changes can be carried out in parallel with mainstream changes.

The *global workset* contains all of the items in the base database. Any structural changes made in a workset (such as adding, deleting, or moving files) are also reflected in the global workset.

Every workset has an associated directory structure. A *workset directory* is a folder within the directory structure, which contains Dimensions *items.* The directory structure may differ from one workset to another. When a change is made to a workset

directory—for example, moving, or creating a file or subdirectory—the change affects only that workset.

Users can associate a *workset root directory* to a workset that is specific only to that user. Dimensions ensures that all check out, check in, and get operations by the user in that workset take place relative to the workset directory. This enables users of the same workset to develop and test their code in separate areas.

Every item in a workset has a *workset filename*. Different worksets can refer to the same item using different workset filenames. This functionality, combined with the ability to define directory structures at the workset level, allows project managers and developers to tailor the development and build directory structures to meet their own needs.

Any new revision of an item appears only in the workset in which it is created. To help you manage worksets and items, Dimensions enables you to import or export item revisions individually or in groups from one workset to another, and to setup automatic replication between worksets. You can also specify trunks and branches when constructing names for item revisions.

To support parallel development using worksets, Dimensions also provides interactive facilities for merging worksets, and for identifying and resolving the conflicting files in the resulting merged workset.

For more information about worksets, see Chapter 7, "Managing Versions."

Baselines

Once a workset has reached a milestone in its development, its content can be frozen in the form of a *baseline*. A baseline is a snapshot that represents a development milestone within a product lifecycle. A baseline consists of a set of item revisions

organized in a design part structure or a workset directory structure.

When a baseline is created, Dimensions records the status of all items that it includes. All items in a baseline are fully preserved for future use, for example, rebuilding the entire configuration, or providing the basis for a new maintenance release.

Baselines are typically used to freeze a configuration within a workset for test, integration, build, or release purposes. They can also be used to meet the audit requirements for DOD-2167A, ISO 9000, SEI Level accreditation, and contractual commitments to milestone payments.

You can create baselines using a rich set of filtering criteria, including design part, item type, related change documents, and status.

For more information about baselines, see Chapter 9, "Managing Baselines."

Releases and Customers

When a baseline passes testing, it may be considered ready for release to customers using the release management facilities. These facilities enable a full or delta configuration of the product to be copied from the protected Dimensions environment to a release directory. Dimensions provides templates that can be applied to the baseline in order to select the objects for release.

Dimensions can record details on customers that have received releases of a product and the specific releases that have been issued to them.

For more information about releases and customers, see Chapter 10, "Managing Releases."

About Dimensions Objects

Along with design parts, baselines, and releases, Dimensions objects consist of items and change documents.

Items

Items are the physical components by which a product is implemented and described. Typical items are source code files, executables, program resources such as graphics, and specification documents. Entire directories of files can also be items. Items are versioned objects with full lifecycle support.

Each item is owned by a single design part and may be used by one or more design parts. Access to an item is controlled by the role assignments for the design part that owns the item, and/or the design parts above the owning design part.

For more information about working with items, see Chapter 7, "Managing Versions."

Change Documents

When a problem, bug, or enhancement arises, you can create a *change document* within Dimensions to represent that change or request. Change documents help in the development lifecycle by automating the change process and ensuring that the required change is implemented. Change documents have lifecycles.

Change documents ordinarily affect one or more design parts and have relationships with other objects such as items and design parts for the purposes of change authorization, change tracking, and impact analysis. You can also use change documents to represent any kind of task, event or issue that needs tracking.

For more information about working with change documents, see Chapter 5, "Managing Changes."

About Relationships Between Objects

Relationships provide traceability between other items, design parts, and change documents. You can use relationships to record whether an item is affected by an issue reported in a change document, or to specify other items which are derived from, or which are used to derive, an item. You can also unrelate items, if necessary, depending on the state the item is in.

Relationship types are system-defined or user-defined. Your administrator can set up user-defined relationship types in the process model.

Item/Design Part Relationships

Items are related to design parts to establish where an item belongs and where it is used within the product. An item is either owned or used by a design part. Only one design part can own an item, but several design parts can use it. Item/design part relationships apply to all revisions of the item.

Item/design part relationships are:

- **Owned.** A single design part can own any number of items. This relationship indicates the part of the product in which the item belongs.

- **Used.** An item can be used by any number of design parts. This relationship indicates that the item is reused in different parts of the product.
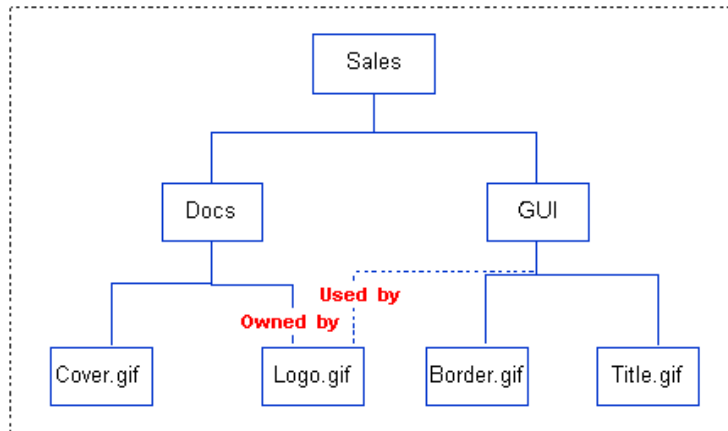
The item *Logo.gif*, which is the company logo bitmap in the product Sales, is owned by the design part Docs and is also used by design part GUI.

Item/Item Relationships

Use item/item relationships to signify a dependency or connection between an item revision and other item revisions. Items can be related one to another by user-defined or system-defined relationships. User-defined relationships are determined by your process model and can be changed. System-defined relationships are pre-defined and cannot be changed.

System-defined item/item relationships are:

■ **Made Of.** An item is made of those item revisions from which it was created by a build process.

■ **Made Into.** An item is made into those item revisions that are built from it.

■ **Created From**. An item is created from those earlier item revision(s) from which it made by merging or editing.

User-defined relationships can also be defined to identify relationships that are specific to your organization or product.

Example:

At Program Utilities Inc., executable programs, such as their flagship product Process Utility, are usually built from a number of object files, such as Setup, task1, task2, and Finish. The system-defined relationship Made Of is used to relate these types of items.

Item/Change Document Relationships

You can relate items and change documents in order to track which items need to be changed and to see whether the items have been modified or approved.

Item/change document relationships are:

■ **Affected By**. An item revision can be affected by one or more change documents. This means that the item(s) need to be modified to implement the changes required by the change document(s).

■ **In Response To**. An item revision can be in response to one or more change documents. This means that these versions of the items are intended to satisfy the required changes as requested in the change document.

■ **Information**. An item revision can have an informational relationship to one or more change documents. This means that the change is related for information purposes only.

Example: Relating a Change Document to Item Revisions

In-Car Inc. has decided to change its web site to American spelling. Sally was assigned the task of combing through the pages and submitting change documents for instances of different spellings. One of the resulting change documents is a request to change "catalogue" to "catalog."

The change document passed to Jane, the web site manager, who identified the page as *Product_List.html*. She relates the existing version, revision 3 of this item to the change document as Affected By.

The changes are assigned back to Sally. When she checks out this item to create revision 4 and update the file, this new revision is automatically related to the change document as In Response To.

Baseline/Change Document Relationships

You can relate baselines and change documents in order to track baselines that need to be changed as a result of change documents, or those that address the issues referenced by change documents.

baseline/change document relationships are:

■ **Affected By**. A baseline can be affected by one or more change documents. This means that the baseline needs to be modified to implement the changes required by the change document(s).

■ **In Response To**. A baseline can be related as in response to one or more change documents. This means that the baseline contains item revisions that are intended to satisfy the required changes as requested in the change document.

■ **Information.** A baseline can have an informational relationship to one or more change documents. This means that the change is related for information purposes only.

About Object Attributes

Every Dimensions object has system-defined attributes. These attributes record and track important configuration information such as creation date, owner, status, and description. Items,

change documents, baselines, and design parts also have *user-defined attributes* that are specified in the process model.

You can view, filter, and report on items, change documents, and baselines using these attributes. Whether you can update a particular attribute depends on your role. You may be required to update specific attributes during certain operations.

Some attributes are inherent or system-defined and are always present for a particular type of Dimensions object. Other attributes are user-defined and are set up specifically for your environment. Dimensions supports a number of different attribute formats.

The attribute update rules defined in the process model by your Product Manager or Change Manager determine which attributes you are authorized to edit for an item, change document, baseline, or design part. You can edit the attributes of multiple objects simultaneously, provided they are all of the same object type.

Example: Attributes for Problem Reports

The change document type *Problem Report* has system-defined attributes that include:

■   Description

■   Date Created

■   Current Status

For example, the Product Manager for the *Maintenance* product defines and associates the following user-defined attributes for problem reports to track help desk information:

■   Severity

■   Urgency

■   Customer Contact Log

About the Process Model and Lifecycles

The *process model* is a set of *lifecycles* that define the development process for different object types, and which *roles* can move them to the next stage.

A *lifecycle* is the set of states and rules for a particular object type and design part. These states typically reflect project stages such as development, test maintenance, change control, and release. The process model maps the product or corporate version and change processes into Dimensions.

Lifecycles are:

■   User-defined and reflect the way in which the organization works.

■   Defined for each type of item, change document, baseline, and design part.

■   Represented as paths. The "normal" path is a successful path while "off-normal" paths represent a failure or a need for rework, or an alternative route through a lifecycle.

Actioning an object moves it to another lifecycle state. When work on the current state is complete, you can action the change document, item, or baseline to the next state. Only users with appropriate roles can action an object. An even more restrictive process model may allow just the lead user of an object type to action an object, and allow other users to add only action descriptions.

For a simple Dimensions object, the lifecycle states might be Opened, Defined, Approved, Rejected, and Closed.

For a major object such as a change document, the states might be Defined, Assessed, Investigated, Approved, Scheduled, Implemented, Checked, Integrated, System Tested, and Released, as well as Queried, Duplicate, Deferred, Rejected, and Rework.

Lifecycles may have only a single state. These lifecycle may be used, for example, for intermediate derived files such as compiled output files, which do not normally follow an approval procedure.
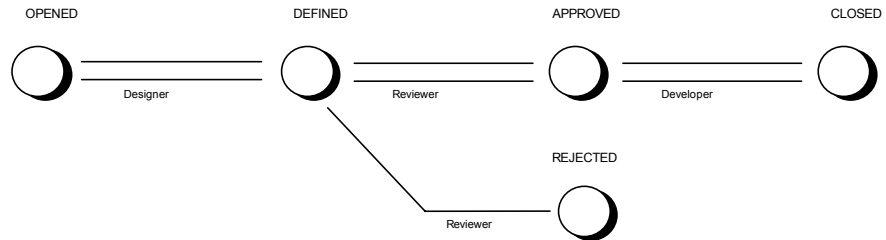
In the lifecycle shown above, only a user with the Reviewer role can action the object from Defined to Approved; and only a user with the Developer role can action it from Approved to Closed.

More than one role can have permission to action an object from one state to another. For example, a Project Leader and a Developer might both be able to action a change document from Approved to Closed.

Design parts must always use the PART_LC lifecycle.

Process models are set up by an administrator in the Administration Console. For more information on setting up and using process models, see the *Process Modeling User's Guide*.

Sample process models are supplied with Dimensions and are described in the *Deployment Guide*.

About Roles and Permissions

The process model determines the stages in the development process, while roles identify who is responsible for the transition between each stage.

Roles are assigned to users according to the object's place in the design part structure and the user's project responsibilities. The roles are then applied to each lifecycle state for the items, change documents, or baselines associated with that design part.

Different roles have different *permissions* to perform tasks depending on the object type and its lifecycle status. Some roles may be specific to your organizations, while others are already defined in Dimensions. The following roles are pre-defined in Dimensions:

■ **Change Manager:** The user with special authority and privileges to manage change documents. The Change Manager can update or action change documents regardless of whose pending list they are in.

■ **Deploy Manager:** The role required to use Serena Mover.

■ **Network Administrator**: The user with special authority and permissions on the base database to set up and modify network configurations.

■ **Originator:** The creator of a Dimensions object. The role of $ORIGINATOR is automatically assigned to the creator of a Dimensions object for the duration of its lifecycle.

■ **Product Manager:** The user who has special authority and permissions to set up the process model rules that are specific to an individual product, and to manage the development process.

■ **Tool Manager:** The user with overall responsibility for how Dimensions operates for all the products across the company, or within the base database.

■ **Workset Manager:** The user with special authority and privileges in the handling of worksets. The Workset Manager sets up and maintains the workset directory structure, adds or deletes items, sets the workset options that regulate how users work within worksets, and locks worksets to create baselines.

NOTE The Dimensions system administrator is not a role defined in the Dimensions database. The user with this role creates the base database, assigns the Tool Manager and performs other administrative task relating to the Dimensions database.

If you need to reassign a task within the same role, you can delegate it. This is useful when you want to reassign a change document or an item to another person, or when there is no assignment yet for roles in later development lifecycle states. Delegation candidates are set up in your process model.

About Authentication Points

Dimensions provides the ability within the process model to define lifecycle states or attributes as *sensitive*. This means that when a user attempts to action an item or change document to or from a sensitive lifecycle state, or attempts to update a sensitive attribute, this results in an authentication point, requiring an electronic signature. The user is presented with an Authentication Point dialog box, requiring them to re-enter their Dimensions password in order to complete the update. Dimensions maintains an audit trail of all failed and successful authentication attempts.

Authentication points are generated only for change documents and items, and occur when you:

■ Action an item or change document to a sensitive lifecycle state, unless the sensitive state is the first normal lifecycle state and you are creating the object.

■ Action an item or change document from a sensitive lifecycle state unless the sensitive state is the first normal lifecycle state and you are creating the object.

■ Modify the value of a sensitive attribute unless the modification occurs as part of creating the object.

■ Delete an an item or change document when it is at a sensitive lifecycle state.

Authentication points are not generated for held change documents.

About Dimensions Architecture

Dimensions is designed to let teams work in parallel on client/ server and other networks, including PCs. With Dimensions, you have the power to control the configuration of the most complex distributed development projects.

Supported Platforms

Dimensions utilizes various RDBMS databases and supports a wide range of platforms (including Hewlett-Packard, Sun, IBM, and PC), and operating systems (including Windows, UNIX, Linux, and z/OS).

Relational Database Engine

Dimensions uses a standard Relational Database Management System (RDBMS) to store the process model, change control documents, change document attachments, and item metadata. As the complete product is modeled within a database, Dimensions can provide different views of the product depending on the specific function and type of end-user. Dimensions has a single view of all data regardless of whether the items being managed are on Windows, UNIX, Linux, or z/OS. A series of documented Published Views onto the database enables standard tools, such as Crystal Reports or Microsoft Excel, to extract

information and present reports. For details about reporting, see the *Reports Guide.*

Project management is more efficient if SCM is woven into the architecture of the product development environment. The open structure of Dimensions means that it can be integrated into new and existing distributed systems, and interfaced to other software tools. Dimensions can also be integrated with manufacturing control and enterprise resource planning (ERP) systems.

Dimensions captures SCM product modeling information in a database, and it provides various control mechanisms to regulate the use of this information and the procedures that are involved in product development. In addition to recording the existence of product items, Dimensions also keeps track of change history, providing a full audit trail of events during product development.

Heterogeneous Platform Support

Dimensions provides a powerful data sharing facility for smooth and effective group work. Dimensions client/server facilities allow users on UNIX, Windows, Linux, VMS and z/OS to share working methods, status information, and files in a consistent and controlled manner. Using the common network protocol TCP/IP, Dimensions integrates file access and change authority across all platforms it is installed on, without requiring a specialized file system such as NFS.

For example, the Dimensions central database can be installed on an IBM RS/6000 running AIX. Dimensions clients can be installed on other computers in the network, such as PCs running Windows and an IBM RS/6000 running AIX. These computers can all successfully query and update the database via the Dimensions server, while remote developers can access the system using the web client.

Layered Architecture

PRESENTATION TIER

| Web Browser | Desktop Client | Command Line (dmcli) | Developer's Toolkit | z/OS Clients | Integrated Development Environments | Add-In for Visual Studio .NET |

BUSINESS LOGIC TIER

HTTP
HTTPS

SDP

**Web Application Containers:
Tomcat, WebSphere AS, OC4J**

Web applications:
- Web client
- Administration Console
- WebDAV server

Windows, UNIX

SDP

**Serena ChangeMan
Dimensions Server**

- Dimensions Listener
- Application Server Pool

Windows, UNIX

Serena License Server

Serena License Manager

Windows, UNIX

**Dimensions Database
Administrator (dmdba)**

Windows, UNIX

DATA TIER

SDP   SDP   SDP

ODBC & CLI   ODBC & OCI   ODBC

DB2 Server

IBM DB2 RDBMS

Windows, UNIX

Oracle Server

Oracle RDBMS

Windows, UNIX

SQL Server

Microsoft SQL RDBMS

Windows

Library Server

Dimensions Listener
Library File Server

Item library file server

Windows, UNIX

**Mainframe
Library Server**

Dimensions Listener
Library File Server

Item library file server

z/OS (USS/HFS)

Work Area

Dimensions Listener
Library File Server

Local or remote file system

Windows, UNIX, z/OS (USS/HFS, MVS)

Legend

SDP — Network connection and protocol

UNIX — Operating system

The architecture of Dimensions products ensures that major corporations are not restricted in their choice of technology. The multi-layered architecture supports open systems and permits maximum growth and integration capability.

Double-Byte Character Support

DBCS in Dimensions has been extended to all strings, for example user names, lifecycle names and states, object types, etc. The only exceptions are:

■   Base database name

■   Product id

■   Version branch names.

DBCS is supported in all primary user interfaces:

■   Command line

■   Desktop client

■   Web client

■   Administration Console.

Note that DBCS characters are not supported by:

■   ISPF Client

■   ChangeMan Builder

■   ChangeMan Mover

■   IDE integrations.

Length Limitations on DBCS Data.

When using DBCS data, all length limitations for Dimensions data are halved. For instance, item and change document type names are normally limited to 10 characters in length (in SBCS environments). In DBCS locales they are limited to 5 characters (10 bytes) in length.

CAUTION! Exceeding these limits may cause unexpected behavior at a later time, and is not certified

Clients and Servers

It is essential that a homogenous environment is present for DBCS use. This means that if the desktop client, and either the web client or Administration Console are to be used, then the web tools server (Tomcat) must run on a Windows machine with the same locale as all of the client machines.

In addition, all machines that access this database (using any client) must use the same locale.

CAUTION! If this condition is not followed, then DBCS data that is entered on one machine with a given client will still be readable by that client. However, if it is read from a different client, or from a machine with a different locale, the data will appear corrupted, even though it is not.

2   Using Dimensions

In this Chapter

This chapter gives you an overview of typical tasks performed by developers and project managers using Dimensions.

About Daily Development Tasks

This section outlines the tasks a developer typically does in the course of a day's work.

This workflow assumes that developers are not using Dimensions from within an integrated development environment (IDE). In that case, this workflow would vary slightly. For information on using Dimensions with IDEs, see the *Development Implementation Guide*.

NOTE This is a simple workflow intended to give you a sense of how Dimensions is commonly used. It does not explain all possible options and variations. Workflows in your organization will vary depending on your development practices, how the Dimensions process model is set up, role assignments, and other factors.

1 **Review your Pending lists.** As a developer, you'll typically start the day by checking your Pending lists for items, change documents, and baselines that have been assigned to you.

   For example, your Pending Change Document list might contain change documents for defects or enhancement requests that have been assigned to you, and the items associated with them.

   For more information, see "About the Main Window Tabs" on page 69 (for the web client) or "About Content Windows" on page 89 (for the desktop client).

2 **Check out items, affected by a change document.** Once you've determined which items you're going to work on, you'll typically check out those items.

Depending on the process model in place, you might be required to relate the new item revision to a change document in order to check the item out.

For more information, see "Checking Out an Item" on page 221.

Alternatively, if you just need to make a quick change, you can edit the item instead of checking it out. Editing and saving an item does the equivalent of checking it out and checking it back in, saving several steps along the way.

For more information, see "Editing an Item" on page 225.

If you are continuing with work from a previous session, and if your process model allows it, you may check out or edit items using the same revision provided the item revision is at an initial lifecycle state.

For more information, see "About Item Specification" on page 202.

3 **Create items as necessary.** During the course of your work, you may need to create new items.

Depending on the process model in place, you might be required to relate the new item to a change document in order to create it.

For more information, see "Creating a New Item" on page 215.

4 **Check items in.** Once you're finished making changes, you'll check the items back in and enter comments to document what you did.

You may have had additional post-coding steps to perform, such as peer review, unit testing, and documentation. You may need to edit item attributes while checking items in to confirm that you did these steps.

For more information, see "Checking In an Item" on page 223.

5 **Action and delegate items.** If you are finished working on this item and it's ready to go on to the next step in the lifecycle (for example, if it's ready for QA), you can action it when you check it in.

   If there are multiple people who can perform the next step and you want it to go to someone in particular, you may delegate it first.

   For more information, see "Actioning an Item" on page 229 or "Delegating an Item" on page 231.

6 **Action change documents.** If there are change documents associated with the items you've finished working on, you'll need to edit their attributes and action the change documents to the next step in the lifecycle.

   You may do this as you complete each change document, or you may action all change documents together at the end of the day.

   For more information, see "Actioning a Change Document" on page 140.

About Project Management Tasks

This section outlines project management tasks over the course of the product development process.

This overview assumes that the process model has already been set up. For information about setting up the process model, see *Process Modeling User's Guide*.

NOTE This is a simple workflow intended to give you a sense of how Dimensions is commonly used. It does not explain all possible options and variations. Workflows in your organization will vary depending on your development practices, how the Dimensions process model is set up, role assignments, and many other factors.

Starting Up a Project

1 **Create product.** When a project involves creating a new product from scratch, the Dimensions Administrator or Tool Manager typically uses the Administration Console to create the new product and identify the Product Manager.

   For information on creating products and defining roles, see the *Process Modeling User's Guide.*

2 **Create design parts.** The Product Manager uses Dimensions to set up the design parts and relate them to form a structure.

   For more information, see "Creating a Design Part" on page 187.

3 **Create product item libraries.** The Product Manager, who is responsible for overseeing development activities, then creates the product item libraries, which are the directory structures in which the item files will be located.

4 **Create item types and associated lifecycles.** The Product Manager uses the Administration Console to define the types of item that are used within the product and the lifecycle stages that they will follow when they are tested and approved.

   For information on object types and lifecycles, see the *Process Modeling User's Guide.*

5 **Create workset(s).** The Project Manager then creates the worksets for use by project personnel. The project may have one workset everyone uses, or it may have different worksets for people who have different roles or who work on different parts of the product.

For more information, see "Creating a Workset" on page 259.

6 **If items already exist, upload them.** You'll upload any existing files into the Dimensions database. Other ones can be created during development.

For more information, see "Uploading Files" on page 242.

7 **Assign roles.** The Product Manager uses the Administration Console to assign roles to project personnel. Roles and their associated permissions determine what actions people can perform on different types of objects at different points in the development process.

For information on assigning roles, see the *Process Modeling User's Guide.*

8 **Define change document types and their associated lifecycles.** The Product Manager uses the Administration Console to set up the change document types that are used for tracking changes and reporting defects, and defines the lifecycles that they are to follow.

For information on object types and lifecycles, see the *Process Modeling User's Guide.*

9 **Set up baseline and release templates.** The Product Manager uses the Administration Console to set up the rules for selecting item revisions to be included in baselines and releases. Baselines are used to capture versions of items at project milestones and to generate releases of the product.

For information on baseline and release templates, see the *Process Modeling User's Guide.*

The project is ready for development activities to begin.

Ongoing Project Management

Here are some of the ongoing tasks typically performed by the Product Manager:

■ **Manage project management items.** Create, change, and action items specifically related to project management, such as project status reports and milestone checklists.

   For more information, see Chapter 7, "Managing Versions."

■ **Manage changes.** Drive the change process by creating change documents, relating them to items, delegating them to developers, and actioning them. Also receive change documents for review and approval.

   For more information, see Chapter 5, "Managing Changes."

■ **Generate reports.** Use user reports to list information you have set up in your Dimensions database.

   User reports use criteria like change document status and item status to answer questions such as these: "Where are we in relation to the next milestone?" "Is this feature going to be in Friday's build?"

   For more information, see "Running User Reports" on page 437.

   You can also use filters to display lists objects that satisfy certain conditions. For more information, see "Creating and Using Object Filters" on page 73 (for the web client) or page 105 (for the desktop client).

■ **Create and manage baselines.** At project milestones, the Product Manager, Build Manager, or individual developers may create baselines.

As development progresses, the Product Manager typically actions a baseline through its lifecycle. This moves the entire project to the next milestone.

The Product Manager may need to compare two worksets or baselines to determine which files have changed.

For more information on baselines, see Chapter 9, "Managing Baselines." For more information on comparing baselines or worksets, see Chapter 12, "Comparing and Merging Projects."

■   **Create and manage releases.** When the product is ready for release, the Product Manager or a designate may create and manage releases and customers.

For more information, see Chapter 10, "Managing Releases."

About Parallel Development

In a project of any size, different people may need to work on the same items for different purposes. Dimensions provides features that allow developers to work on the same items without conflict, and to resolve and consolidate changes.

The Dimensions work model for parallel development uses worksets and version branches to separate concurrent activities on the same items.
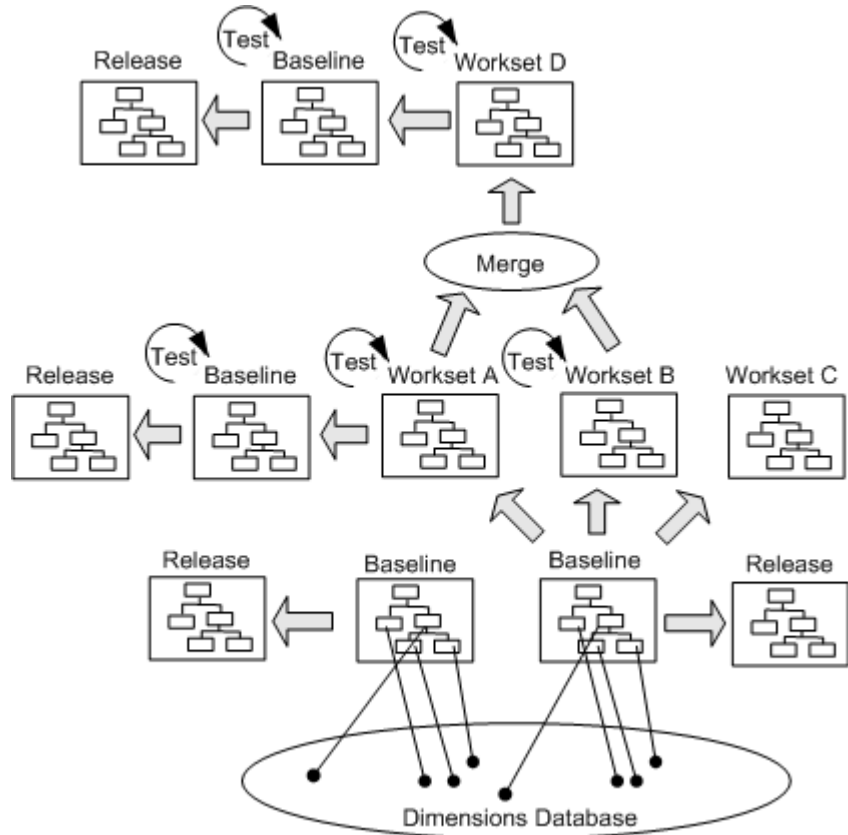
The preceding figure shows the following important points:

■   You can create several worksets from a baseline or existing workset to support separate lines of development. A baseline typically includes all the source and derived items that constitute a previous product release. You can then edit the workset by adding new item revisions to it or deleting item revisions from it.

■   You can associate a list of valid version branch names with a single workset, so that users can check out individual items to a named branch.

■ You can then merge worksets or item revisions so that mainstream development can pick up the changes made in parallel.

About Merging

Dimensions provides a set of features to enable you to resolve and merge changes at the item revision, workset, and project levels.

Merging Item Revisions

Typically, when two or more parallel streams of development occur on the same file, it is necessary to merge the separate changes at some later point in time. Dimensions provides a comprehensive conflict resolution facility capable of merging any number of input files. For detailed information on comparing and merging changes to the file content of an item, see "About Comparing and Merging Item Files" on page 243.

NOTE The following figure illustrates a scenario for version development for file *foo.c*, where boxes denote branches and circles indicate revisions within branches. There are three significant development branches, MAIN, WINDOWS_NT and MAINTENANCE, and two bug fix sub-branches emanating from the MAINTENANCE branch. The figure also shows that some of the changes were later consolidated back into the MAIN branch and released into Release 2.0.
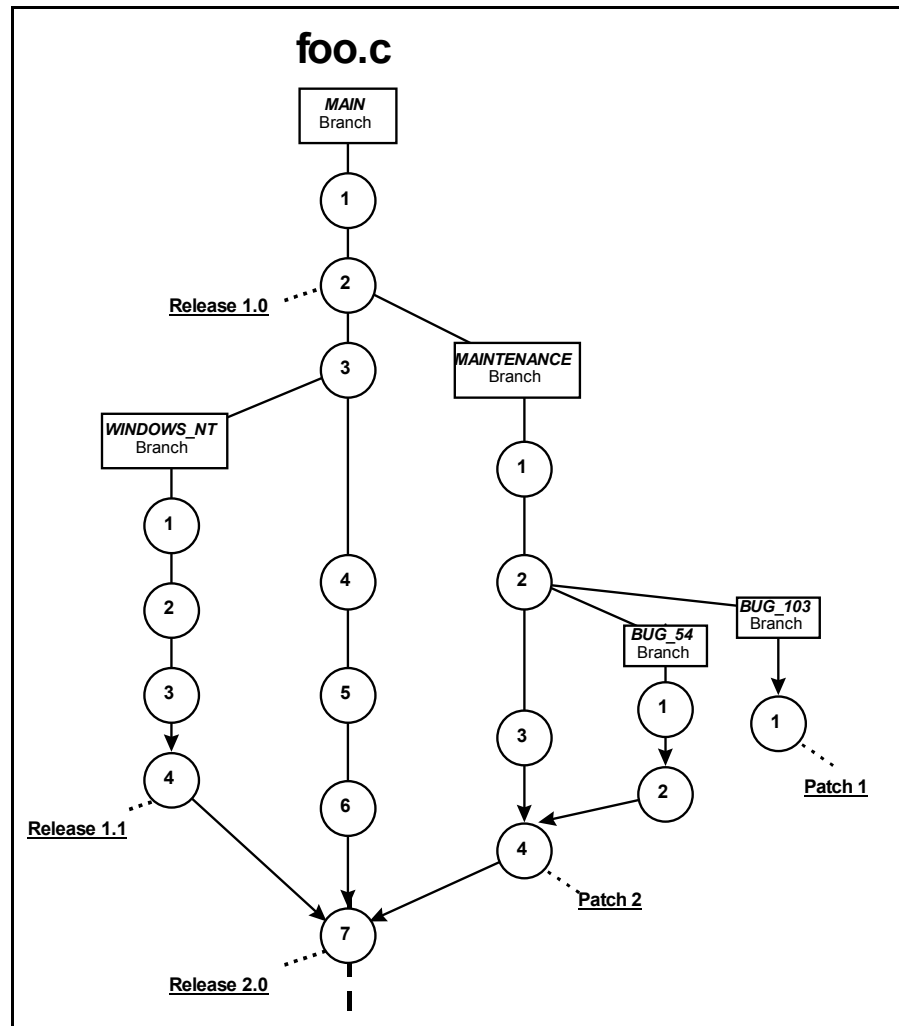
NOTE This example used named branches within the *same* workset.

Merging Projects

Development changes made in parallel may need to be absorbed into mainstream, or files on local machines may need to be

consolidated into version control with conflict management. This may be achieved by merging the contents of worksets, baselines, and directories.

For example, two worksets may be merged into a new workset by including all the non-conflicting revisions and then resolving those which contain conflicting changes.

To facilitate this important project management function in an intuitive way, Dimensions provides the interactive Project Merge Tool for merging worksets, baselines and file areas on disk.

The graphical Project Merge Tool clearly highlights differences between files on disk or in a workset or baseline using color and icons. Based on the differences displayed you can select which changes to include and can invoke the Serena ChangeMan Merge Tool to resolve any conflicts in a graphically intuitive way.

There is also a Merge function and a Resolve Conflicts function for use in merging the contents of worksets.

For information on merging projects, see Chapter 12, "Comparing and Merging Projects."

About Parallel Development Tasks

There are two basic models for parallel development: one uses worksets, and the other uses branches. This section outlines workflows based on these methods.

NOTE These are simple workflows intended to give you a sense of how Dimensions is commonly used. It does not explain all possible options and variations. Workflows in your organization will vary depending on your development practices, how the Dimensions process model is set up, role assignments, and many other factors.

Multiple Worksets

If you are doing maintenance on a single product, you might start by branching off a maintenance workset. You would work on it until you want to bring it back to main development, then merge the worksets.

Multiple Worksets and Named Branches

A more complex scenario involves doing a customer-specific release using multiple worksets and named branches.

1 Start by baselining the main line of development.

2 Create a new workset and named branch for the customer that consists only of items that will be changed for this customer, as well as any new items.

3 Work on both the main line and the customer branch.

4 Once the customer-specific changes are ready, baseline the customer and main line worksets.

5 To get a baseline you can build from, merge the customer and main line worksets.

The following figure illustrates multiple worksets with branching. There are three worksets: MAIN, WINDOWS_NT, and MAINTENANCE. Notice that the revision 3 in the main branch is used to start the WINDOWS_NT branch in the WINDOWS_NT workset, and revision 2 in the main branch is used to start the maintenance branch in the MAINTENANCE workset.

Also notice that in the MAINTENANCE workset, two separate sub-branches emanate from the maintenance branch, illustrating the important point that parallel development on the same file may occur within the same workset and is not necessarily restricted to occur across different worksets.

foo.c

Workset for
Windows NT

Workset for
Mainstream
Development

Workset for
Maintenance

3   Web Client Basics

In this Chapter:

About the Dimensions Web Client

The Dimensions web client is a web-based application that gives you access to your Dimensions database using your web browser. The web client can be used with Windows, UNIX, and Linux web browsers to access a Dimensions server and database on a network node.

With the web client, you can perform the basic tasks necessary to create, modify, and action items, change documents, and baselines, as well as to create and manage worksets. To create releases and forward them to customers, you must use the desktop client.

About Logging into Dimensions

To work with objects in Dimensions, you log into the Dimensions database. Your Administrator can provide you with your user name and password and the connection information for the Dimensions server and base database for your product. If you are working on multiple products that are stored in different databases, you need the connection information for each of those databases.

About Logging into Remote Nodes

You can access files and directories that are located on a remote network node, such as a z/OS mainframe. For example, you might be working with files that are stored on a different node than your Dimensions web client, or your working area might be on a remote network node.

To access these files and directories, you must first log into the remote node using the Authenticate link to access the **Remote Node Login** dialog box.

Accessing the Web Client

Purpose   The first time you access the login page for Dimensions on your browser, you will be asked for permission to run the applet. This applet does not get installed on your machine, although it may be cached by your Java Virtual Machine (JVM).

The "native components", however, may need to be installed in order to:

■   Use the file merge tool

■   Perform certain item-based file operations, such as check out and check in, if you are using Internet Explorer with the Microsoft JVM.

To access the login page you must get the URL from your Dimensions Administrator.

NOTE You may need to log in with administrator privileges on your computer to install the (optional) native components of the web client.

To access the Web client applet:

1   Start your web browser, and type the URL for the Dimensions login page.

The format of the URL is:

```
http://hostname:port/dimensions/
```

hostname is the Dimensions web server and *port* is the web server port number.

2   You are prompted to allow the web client applet to run each time you open the URL. Click Yes to allow the applet to run.

To install the native components of the Dimensions Web client:

1   Click the Install native components
    link: Install native components and follow the instructions on
    the *Install native components* page.

    You may not have privileges to install the native components, in which case see your system administrator.

2   If prompted, restart your browser to complete the installation.

To set up Internet Explorer:

1   Start Internet Explorer.

2   Select Tools | Internet Options.

3   On the General tab, click the Settings button.

4   For **Check for newer versions of stored pages**, select either **Automatically** or **Every visit to the page**.

5   Click the Security tab, select the zone that contains the Dimensions server, and select **Medium Security**.

6   Click the Advanced tab, and deselect **Reuse windows for launching shortcuts.**

7   Click the OK button.

To set up Netscape:

1   Start Netscape.

2   Select Edit | Preferences.

3   In the Category tree, select Advanced.

4   Make sure that **Enable Java** is checked.

5   In the Category tree, select Advanced | Scripts and Plugins.

6   Under **Enable JavaScript for**, make sure that **Navigator** is selected.

7   In the Category tree, select Advanced | Cache.

8   **Under Compare the page in the cache to the page on the network**, make sure that either **Every time I view the page** or **When the page is out of date** is selected.

9   Click OK.

Logging into Dimensions

Purpose   Log into Dimensions when you want to use the web client to perform tasks such as checking out, editing, or actioning objects.

Before you log in, you must get the following information from your Dimensions Administrator:

■   The URL for the Dimensions web server

■   The name of the database for the product you are working with

■   The connection string for that database

■   If you are accessing files and directories on a remote node, the user name and password for an account on the remote node.

Permissions   You must be a registered Dimensions user.

NOTE You can only run one web client browser session on the same client machine at any one time.

To log into Dimensions:

1 Start your web browser, and type the URL for the Dimensions login page.

The format of the URL is:

```
http://hostname:port/dimensions/
```

hostname is the Dimensions web server and *port* is the web server port number.

2 On the Login page, enter the following information:

- For **User Name**, type a user ID that is registered on the Dimensions base database.

- For **User Password,** type a password for a user ID that is registered on the Dimensions base database.

- For **DB Name**, type the Dimensions database name.

■ For **DB Connection**, type the Dimensions database connection string, if it is not already present.

System	
Username:	dmsys
Password:	•••••
Dimensions	
DB name:	intermediate
DB connection:	DIM9
Menu set:	Default ∨
	Login Help
	🖵 Install native components 🖵 About web client

3 If you want access to a different set of functions from the default, choose a value from the Menu Set list. Choose between:

   ■ All-this allows access to all of the web client functions

   ■ Change Only-this only allows access to change management functions.

NOTE You may not have access to the *All* option.

---

4 If you want to check the version of the web client that is installed, and other system information, click the About web client link: 🖵 About web client

5 Click the Login button.

To log into a remote node:

1 Log into Dimensions.

2 In the status area, click the Authenticate link: 🖳 Authenticate

3   In the **Network Node** field, type the name of the remote node.

4   For **Login ID**, type your user name for the remote node.

5   For **Password**, type your password for the remote node.

6   Click the OK button.

About the Main Window

The main window of the Dimensions web client has a number of tabs. For a description of each tab see "About the Main Window Tabs" on page 69.

The main parts of the window are described below.
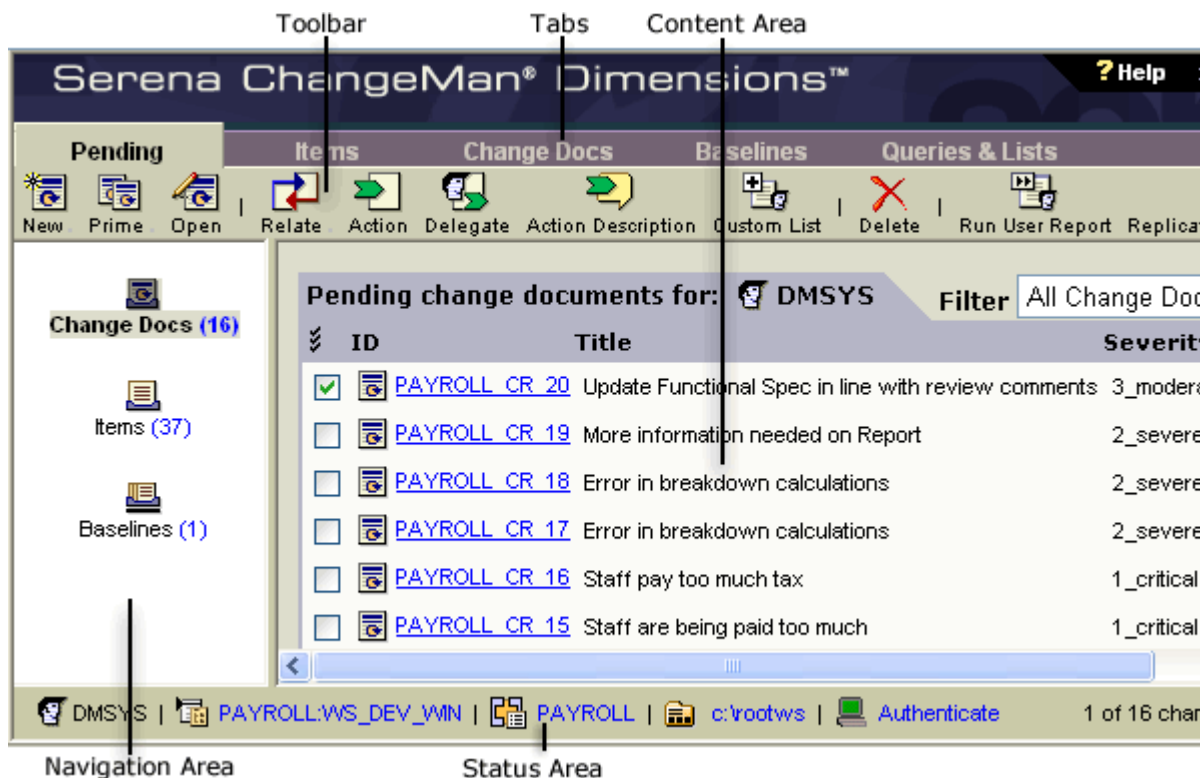
Toolbars. The toolbars contain buttons for all Dimensions commands. The available buttons change depending on which tab you are working in.

Tabs. Tabs show different views of the objects in a product. Tabs display different object lists and object trees, depending on your current task.

Navigation area. The navigation area gives you either icons or object trees which display different types of objects in the content area. For more information, see "Working in the Navigation Area" on page 72.

Content area. The content area shows lists of objects. For example, on the Pending tab, the content area shows either your pending items, pending change documents, or pending baselines. You select objects in the content area to work with them. For more information, see "Working in the Content Area" on page 71.

Status area. The status area shows your user name, the current workset, the current product, the current workset directory, and the number of selected objects in the content area. The status bar contains links that you click to change the product, change the workset, or log into a remote node.

About the Main Window Tabs

Tabs give you different views of the objects in a product. The following table lists the tabs you can use in the Dimensions web client.

Tab	Use this tab to...	To use this tab...
Pending	Work with change documents, items, and baselines that are assigned to you for action.	Click the tab, and in the navigation area, click one of the following: ■ The Change Docs icon: ■ The Items icon: ■ The Baselines icon:
Items	Work with all items in the product, in a view that is organized either by workset directory or by design part.	Click the tab, and in the navigation area, select a folder. To switch between the workset view and the design part view, click the More button: , and select **Switch Tree**.
Change Docs	Work with all change documents in a product or all change documents that affect a design part.	Click the tab, and in the navigation area, do one of the following: ■ To see all change documents in the product, click the Catalog icon: Catalog ■ To see the change documents that affect a design part, click the design part folder:

Tab	Use this tab to...	To use this tab...
Baselines	Work with all baselines in a product or all baselines created from a design part.	Click the tab, and in the navigation area, do one of the following: ■ To see all baselines in the product, click the Catalog icon: Catalog ■ To see the baselines created from a design part, click the design part folder:
Queries & Lists	Create and run queries on change documents. Create and display Custom Lists.	Click the tab, and in the navigation area, do one of the following ■ To access queries, click the Queries tab at the bottom of the navigation area: Click a query icon to perform it: ■ To access Custom Lists, click the Lists tab at the bottom of the navigation area: Click a Custom List icon to perform it:

Working in the Content Area

Purpose   You use the content area to view, select, and modify items, change documents, baselines, or change document queries, depending on what you have selected in the navigation area. Objects are displayed in a table, called an *object list*. The way you work with object lists is the same for all object types.

Permissions   No permissions required.

To select objects:

Do one of the following:

- **To select an object**, click the check box next to it: ☑

- **To select all objects in the list**, click the select all icon in the column heading: ⚡

To sort a list based on the contents of a column:

1   Click the header of the column you want to sort by.

   - An up arrow ⬆ indicates that rows are sorted in ascending order.

   - A down arrow ⬇ indicates that rows are sorted in descending order.

2   To change the sort order, click the column header.

To save and print a list:

1   Do one of the following:

   - To create an HTML file, click the HTML button: 🖨

   - To create a text file with commas separating the values (CSV file), click the CSV button: 🗒 You see the list in your web browser.

2   To save the list, use your browser's save command.

3 To print the list, use your browser's print command.

Working in the Navigation Area

Purpose

In the navigation area, you work with object trees to select what to display in the content area. An *object tree* displays hierarchical objects in a tree view. The web client has two object trees: the Workset Structure tree shows the organization of the current workset, and the Design Part Structure tree shows the organization of the product design parts.

On the Items tab, you can switch between the two trees.

Permissions

No permissions required.

To navigate an object tree:

Do any of the following:

- **To expand a folder,** click the plus sign (+) next to it.

- **To collapse a folder,** click the minus sign (-) next to it.

- **To select a folder,** click it.

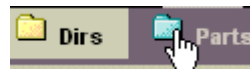**To switch trees on the Items tab:**

- **To select the design part tree,** click the Parts tab in the navigation area:

- **To select the workset tree,** click the Dirs tab in the navigation area:

To switch views on the Queries & Lists tab:

- **To select the Queries tab**, at the bottom of the navigation area click the Queries tab:

- **To select the Lists tab**, at the bottom of the navigation area, click the Lists tab:

Creating and Using Object Filters

Purpose

Create and use filters to reduce the number of items, change documents, and baselines that are displayed in the content area. A filter is a set of search criteria that you use to locate and display objects that match your criteria.

The web client includes some filters for common operations, such as finding all items, change documents, or baselines on your Pending list. You can also create your own filters.

Permissions

No permissions required.

To create a filter:

1   In the content area, from the **Filters** list, select **New Filter**.

2   In the **Filter Name** field, type a name for the filter.

3   On the General tab, set values to limit the number of objects found.

For more information about the values on each tab, click the Help button in the dialog box.

4   To search for objects by specifying attribute values, do the following:

      a On the General tab, from the **Item Type** field, select the object type.

      b Click the Attributes tab, and type or select values.

  5 Click the OK button.

     You see the new filter in the **Filters** list.

To use a filter:

In the content area, from the **Filters** list, select a filter.

The content area shows the objects that match the search criteria in the filter.

To edit a filter:

  1 In the content area, from the **Filters** list, select a filter.

  2 From the **Filters** list, select **Edit Current Filter**.

  3 On the General tab, set values to limit the number of objects found.

     For more information about the values on each tab, click the Help button in the dialog box.

  4 To search for objects by specifying attribute values, do the following:

      a On the General tab, from the Item **Type** field, select an object type.

      b Click the Attributes tab, and type or select values.
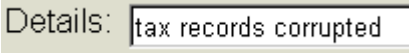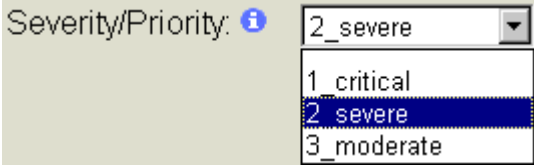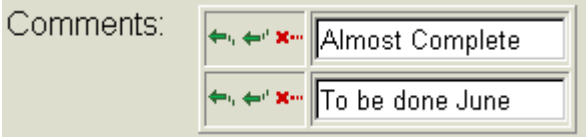
  5 Click the OK button.

To delete a filter:
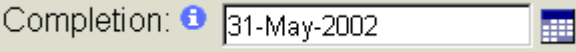
  1 In the content area, from the **Filters** list, select a filter.

  2 From the **Filters** list, select **Delete Current Filter**.

About Editing Object Attributes

An object can have attributes in a number of different formats. Attributes can contain text, a number, a date, or a value that you select from a list.

The following table describes how to edit object attributes.

For this type of field...	Do this...
Text Details: tax records corrupted	Click the field and type text. If the field allows multiple lines of text, text wraps to the next line. To start a new line, press ENTER.
Single selection list Severity/Priority: 2_severe 1_critical 2_severe 3_moderate	Click the down arrow, and select a value from the list.
Multiple value attribute Comments: Almost Complete To be done June	Type or select a value. To add a value above the current one, click ←, To add a value below the current one, click ←' To delete a value, click ✗⋯

For this type of field...	Do this...
Column	In each field, type or select a value.
	To add a value above the current value, click ←
	To add a value below the current value, click ←
	To delete a value, click ✗
Date and time	Click the field and type a date in the following format:
	dd-mon-yyyy [*hh:mm:ss*]
	You can also click the calendar button 🔲 and select a date in the Calendar dialog box.

Relating and Unrelating Objects

Purpose   Relate objects when you want to show a connection between them. You can relate an object to several other objects. For example, a change document might be related to several item revisions.

Permissions

To create this relationship...	You must have these permissions...
Item/item	The parent item must be in your Pending list, or you must be a Product Manager.
Item/change document	The parent change document must be in your pending list, or you must be a Change Manager.

To create this relationship...	You must have these permissions...
Item/design part	The item must be in your Pending list, or you must be a Product Manager.
Change document/ change document	The parent change document must be in your pending list, or you must be a Change Manager.
Change document/ design part	The change document must be in your Pending list, or you must be a Change Manager.
Change document/ baseline	To relate as *Affected* or *In Response to*, the change document and the baseline must both be in your Pending lists, or you must be a Change Manager. No special permissions are required to relate as *Info*.
Release to customer	You must be the Product Manager for the product that owns the release.

To relate objects to items, change documents, or baselines:

1 On the Pending tab, Items tab, Change Docs tab, or Baselines tab, select the object you want to relate.

2 Click the Relate button: and select the type of object you want to relate to the selected object.

3 In the Relate dialog box, for **Relationship type**, select a relationship.

 The available relationships depend on the object type and on your process model.

4 For **Relate to**, click the browse button: , and use the Selection Wizard to find one or more objects.

 For help with the Selection Wizard, click the Help button in the wizard.

5   Click the Save button.

To unrelate objects from items, change documents, or baselines:

1   On the Pending tab, Items tab, Change Docs tab, or Baselines tab, click the name of the item, change document, or baseline from which you want to unrelate objects.

2   In the Open Change Document, Item, or Baseline dialog box, click the Relationships tab.:

3   Select the type of object you want to unrelate in the **Related Objects Class** field.

4   Optionally, use the **Filter** field to filter the list of objects shown in the Relationships tab.

5   Select the required objects in the **Children** and/or **Parents** lists., and click the Unrelate button:

6   Click the Save button.

Switching Products

Purpose   Switch products when you want to work with items, change documents, and baselines that are owned by a different product.

Switching products enables you to use a product that is different than the one that owns the current workset. If the current workset is set to $GENERIC:$GLOBAL, setting a product enables you to see an actual design part structure in the navigation area.

To switch products:

1   In the status area, click the product link: PAYROLL

2   For **New Product**, do one of the following:

■ **To switch to a different product**, select a product.

■ **To switch to the product that owns the workset** whenever you select a workset, select **<workset's product>**.

3 Click the OK button.

4   Desktop Client Basics

In this Chapter

About the Dimensions Desktop Client

The Dimensions desktop client is a Microsoft Windows-based application that gives you access to your Dimensions database. The desktop client enables you to perform all tasks described in the Dimensions user guide and help system.

The desktop client runs on IBM-compatible personal computers running Microsoft Windows. With the desktop client, you can access a Dimensions server and database on your Windows computer, or you can access a Dimensions server and database on a network node. For information about configuring network nodes, see the *Distributed Development Guide*.

To use the desktop client, it must be installed on your Windows computer. For installation information, see the *Installation Guide*.

About Logging into Dimensions

To work with Dimensions, you log into the Dimensions database. To log in, your user ID and password must be registered on the Dimensions base database for your product. If you are working on multiple products that are stored in different databases, you need the connection information for each of those products.

About Login Profiles

You can save your login details for a product as a *login profile*. Creating login profiles is particularly useful if you access multiple databases or different Dimensions server installations. A login profile saves all of your connection information, except your password.

About Logging into Remote Nodes

You can access files and directories that are located on a remote network node, such as a z/OS mainframe. For example, you might be working with items that are stored on a different node than your Dimensions database server, or your working area might be on a remote network node.

To access these files and directories, you must log into the remote node. You can:

■   Manually log into the remote node at any time while you are using the desktop client.

■   Wait to log into the remote node until you access a file on the node and see the Login to Remote File Node dialog box.

■   Automatically log into the remote node when you start the desktop client. To use this alternative, your Dimensions Administrator must allow automatic login.

About Automatic Login

If your Dimensions Administrator has set up your account to allow automatic login, you can automatically log into Dimensions when you start the desktop client. When you log in automatically, you bypass the Dimensions splash screen and the Login dialog box.

You can still access the Login dialog box if you need to change your connection information, for example, if you need to access a different database.

Logging into Dimensions

Purpose

Log into Dimensions when you want to use the desktop client to to perform tasks such as checking out, editing, or actioning objects.

Before you log in, you must get the following information from your Dimensions Administrator:

■ The name of your Dimensions server.

■ The name of the database for the product you are working with.

■ The connection string for the database.

■ If you are accessing files and directories on a remote node, the user name and password for an account on the remote node.

Permissions

You must be registered on a Dimensions base database.

To log into Dimensions:

1 From the Windows Start menu, select Start | Programs | Serena | ChangeMan | Dimensions 9.1 | Desktop Client.

2 In the Login dialog box, enter the following information:

■ For **User Name**, type a user ID that is registered on the Dimensions base database.

■ For **Password**, type the password for user ID that you entered.

■ For **Server**, type the Dimensions server name.

■ For **DB Name**, type the Dimensions database name.

■ For **DB Connection**, type the database connection string, if it is not already present.

3   To log into Dimensions automatically in future sessions, select the **Enable Automatic Login** check box.

NOTE This check box is only enabled if your Dimensions Administrator has allowed automatic login.

---

4   Click the Connect button.

To log into another Dimensions server without closing the desktop client:

1   From the desktop client, select File | Logoff.

2   Complete the Login dialog box as described above in To log into Dimensions.

To log into a remote node:

1   Log into Dimensions.

2   Select File | Remote File Node Login.

3   If you are logging into the remote node for the first time, do the following:

   a   Click the Add button.

   b   In the Add Remote File Node dialog box, type the name of the remote node and click the OK button.

   c   For **User ID**, type your user name for the remote node.

   d   For **Password**, type your password for the remote node.

4   If you are logging into a node you have accessed previously, from the **Physical Node** list, select the node name.

5   To log into Dimensions automatically in future sessions, select the **Login Automatically** check box.

NOTE This check box is only enabled if your Dimensions Administrator has allowed automatic login.

6   Click the Login button.

To access the Login dialog box during automatic login:

■   Hold down Ctrl, and from the Windows Start menu, select Start | Programs | Serena | ChangeMan | Dimensions 9.1 | Desktop Client.

To create a login profile:

1   In the Login dialog box, from the **Profile** list, select **New**.

2   Select the **Save settings** check box.

3   Overtype the name in the Profile field with the name you want to use to identify the new profile.

4   Populate the remaining fields in the Login dialog box.

5   Click the Connect button. All of your login information except your password is stored in the login profile.

To use a login profile:

1   In the Login dialog box, from the **Profile** list, select a profile.

2   In the **Password** field, type your password.

3   Click the Connect button.

About the Main Window
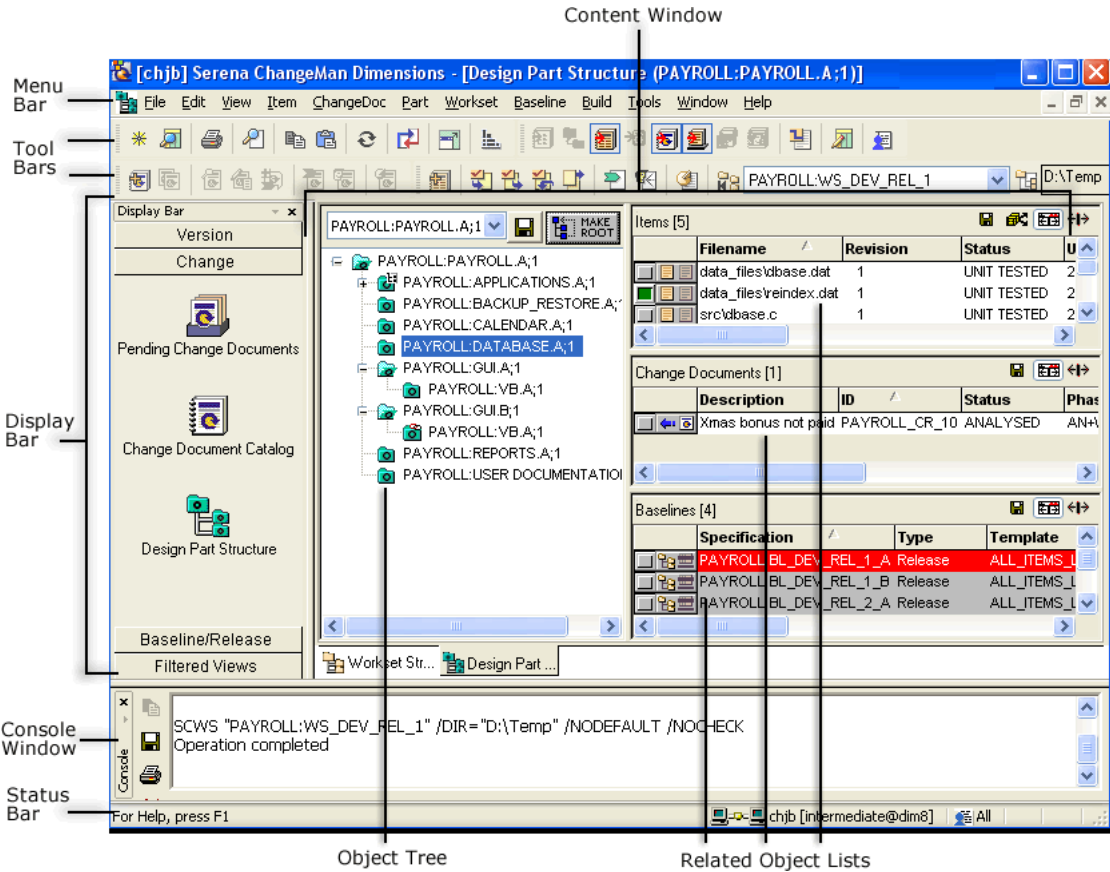
Menu bar. The menu bar contains menus with all of the Dimensions commands. The available menus change depending on which content window you are working in. You can customize the menus by adding and removing menu commands. For more information, see "Customizing the Menus and Tool Bar" on page 478.

Toolbars. The toolbars contain buttons for commonly used Dimensions commands. The available buttons change depending

on which content window you are working in. You can customize the toolbars by adding or removing buttons. For more information, see "Customizing the Menus and Tool Bar" on page 478.

Display bar. The Display bar contains icons that you use to open content windows. For more information, see "Working with the Display Bar" on page 88.

Content window. Content windows show different views of the objects in a product. Content windows display different object lists and object trees, depending on your current task. For more information, see "About Content Windows" on page 89.

Object list. Object lists display objects in table form. There are object lists for items, change documents, baselines, worksets, releases, and customers. For more information, see "Working in Object Lists and Trees" on page 94.

Object tree. Object trees display hierarchical objects as a tree. There are object trees for worksets and design parts. For more information, see "Working in Object Lists and Trees" on page 94.

Console window. The console window shows Dimensions commands and the results of those commands. You can type commands into the Console window. For more information, see "Working in the Console Window" on page 97.

Status bar. The status bar shows tool tips for toolbar buttons, your current login details, and the currently selected set of menus.

Working with the Display Bar

Purpose

Use the Display bar to open the various content windows that enable you to work with Dimensions objects. You can choose to always have the Display bar visible, to hide it, or to float it in the main window with any content windows you have open. You can

also choose to display large or small icons to represent the available views.

Permissions   No permissions required.

To show or hide the Display bar:

Select View | Display bar to toggle the Display bar on and off. You can also right-click in the Display bar window and select **Hide**.

To dock the Display bar:

Drag the title bar to the position where you want to dock the window. To dock the Display bar, docking must be enabled (right-click anywhere in the Display bar and check that **Allow Docking** is selected).

To float the Display bar in the main window:

In the Display bar window, right-click and select **Float in Main Window**. This option is disabled if Workspace Tab Mode, on the User Interface tab of the Preferences dialog box, is set to Tab per window. See for details.

To display small icons:

In the Display bar window, right-click and select **Small Icon**.

To display large icons:

In the Display bar window, right-click and select **Large Icon**.

About Content Windows

Content windows give you different views of the objects in a product. A content window shows an object list or object tree in the left side of the window, and related object lists on the right. You can open multiple windows and switch between windows at any time. You can customize the desktop client so that specific windows are automatically opened when you first log in using

the **Initial views** section of the Customize Menu Sets/Tools dialog box. This is described in "To Set Initial Views" on page 487.

The following table lists the content windows you can open in the Dimensions desktop client.

Window type	Use this window to...	In the Display bar, click...	...and then click this icon...
Workset Structure	Work with items in the current workset, in a view organized by workset directory.	Version	Workset Structure icon: Workset Structure
Pending Items	Work with items that are assigned to you for action.	Version	Pending Items icon: Pending Items
Item Catalog	Work with all items in the product.	Version	Item Catalog icon: Item Catalog
Design Part Structure	Work with items, change documents, and baselines in a view organized by design part.	Version or Change	Design Part Structure icon: Design Part Structure
Pending Change Documents	Work with change documents that are assigned to you for action.	Change	Pending Change Documents icon: Pending Change Documents

Window type	Use this window to...	In the Display bar, click...	...and then click this icon...
Change Document Catalog	Work with all change documents in the product.	Change	Change Document Catalog icon: Change Document Catalog
Workset Catalog	Work with all worksets in the product.	Baseline/ Release	Workset Catalog icon: Workset Catalog
Pending Baselines	Work with baselines that are assigned to you for action.	Baseline/ Release	Pending Baselines icon: Pending Baselines
Baseline Catalog	Work with all baselines in the product.	Baseline/ Release	Baseline Catalog icon: Baseline Catalog
Release Catalog	Create releases and forward them to customers.	Baseline/ Release	Release Catalog icon: Release Catalog
Customer Catalog	Create customers and modify customer information.	Baseline/ Release	Customer Catalog icon: Customer Catalog
Find	Work with objects you found using a search filter that you created.	Filtered Views	The icon for the filter that you created. Filtered Views is empty until you create and save a filter.

Working with Content Windows

Purpose
Content windows are just like document windows in other Microsoft Windows applications. You can open more than one window, switch between open windows, minimize and maximize windows, and tile or cascade windows.

Permissions
No permissions required.

To switch to another window:

Do one of the following:

■ Select Window, and select a content window.

For example, to switch to an open Workset Structure window, select Window | Workset Structure.

■ Click the workspace tab for the window.

For example, to switch to an open Item Catalog window, click the Item Catalog tab.

To close a window:

Click the window Close button:

To minimize, maximize, or rearrange windows:

Do one of the following:

■ **To minimize a window,** on the window title bar, click the Minimize button:

■ **To reduce a window,** on the window title bar, click the Restore Down button:

- **To maximize a window**, on the window title bar, click the Maximize button: ▭

- **To cascade windows**, select Window | Cascade.

- **To tile windows**, select Window | Tile Horizontally.

- **To make a window fill the entire screen**, select View | Full Screen. This results in the current window filling the entire screen and maximizing the desktop client window.

NOTE In full screen view, the menu bar, Display bar, Console window, and tool bars are hidden. You can still access the menu bar by moving the mouse pointer to the top of the window, which temporarily displays it, enabling you to choose a menu option.

- **To restore a full screen view to the standard view**, do one of the following:

  - Click the Close Full Screen button in the floating Full Screen toolbar:

Full Screen ❌
Close FullScreen

  - Select View | Full Screen.

To open an object in a new window:

1 In an object list, right-click the object and select Open New Window. You see the object in a new content window.

NOTE Depending on the object, you may also open a new window for an object by double-clicking on it. This depends on the setting for the object type under **Double-click behaviors** on the User Interface tab of the Preferences dialog box. For further details, see "Setting the User Interface Options" on page 457.

---

2   Select the object to see its related objects.
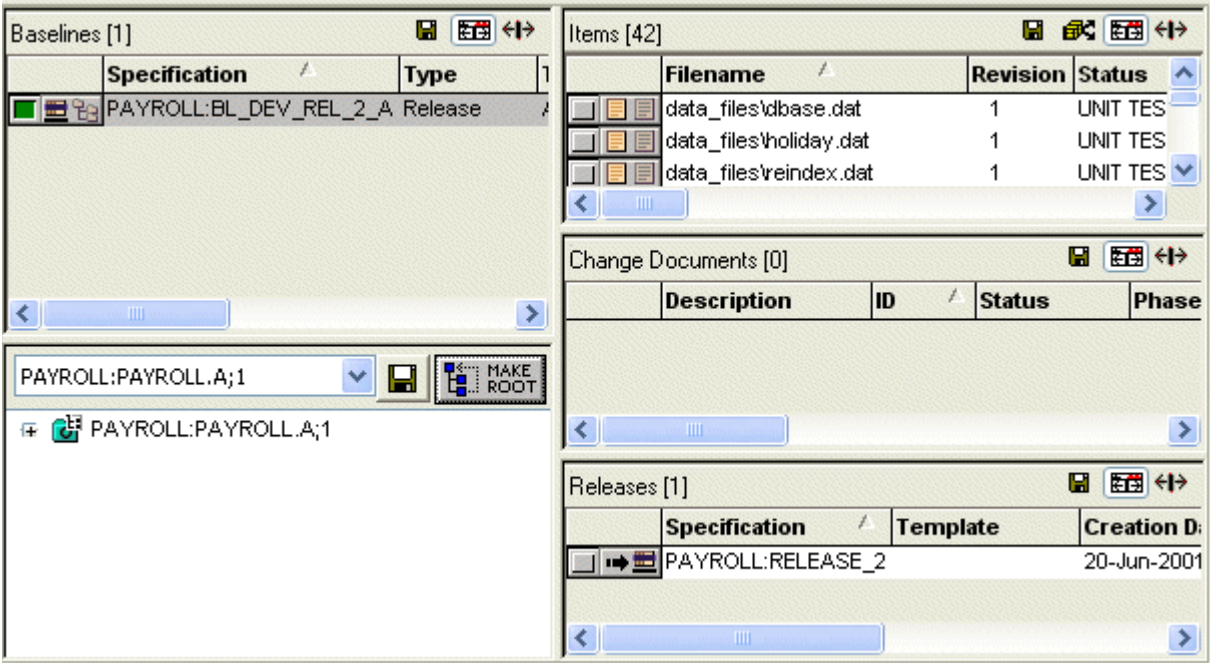
To show or hide related object lists:

■ **To show related object lists**, from the View menu, select the related objects you want to see. For example, in a Change Document Catalog window, you can view items, change documents, and parts.

■ **To hide a related object list**, from the View menu, select the object again.

Working in Object Lists and Trees

Purpose

In a content window, you use object lists and object trees to select objects so that you can perform tasks with them.

Object lists display objects in table form. In an object list, such as an Items list, you can select objects, change the order in which objects are displayed, resize columns in the list, and save the list.

Object trees display hierarchical objects in a tree view. In an object tree, such as a Design Part tree, you can navigate the tree, select a subfolder as the new top-level folder, and save the contents of the tree.

Permissions   No permissions required.

To select objects in a list:

Do any of the following:

- **To select a single object**, click the select button next to the object, or click anywhere in the row containing the object.

- **To select multiple objects**, Ctrl+click each object.

- **To select a range of objects**, click the first object in the range, then SHIFT+click the last object.

- **To select all objects in the list**, click the blank column heading,

or click anywhere in the content window and type Ctrl+A.

To sort a list based on the contents of a column:

1 Click the header of the column you want to sort by.

- An up arrow indicates that rows are sorted in ascending order.

- A down arrow indicates that rows are sorted in descending order.

2 To reverse the sort order, click the column header again.

To resize list columns:

Do one of the following:

- **To automatically expand columns** to show the widest field in the column, click the Auto Resize button: ⊞

- **To manually resize a column,** drag the boundary on the right side of the column heading until the column is the width you want.

- **To recalculate columns widths** for the best fit, click the Resize button: ⬌

To navigate an object tree:

Do any of the following:

- **To expand a folder,** click the plus sign (+) next to it.

- **To collapse a folder,** click the minus sign (-) next to it.

- **To select a folder,** click it.

To view only a portion of a Design Part tree:

1 In a Design Part tree, select the folder you want to display as the top-level folder in the tree.

2 Click the Make Root button: MAKE ROOT

   The tree displays only the folder you selected, along with its subfolders.

3 To view the entire tree again, in the list at the top of the tree, select the top-level design part name.

To save the contents of a list or tree:

1 Click the Save button: 💾

2 In the Save As dialog box, type a filename.

3 Select a format:

■ To save the list or tree in an HTML file, from the **Save as type** list, select HTML Files (*.html).

■ (List only) To save the list in a text file with commas separating the fields, from the **Save as type** list, select CSV Files (Comma Delimited) (*.csv).

4   Click the Save button.

Working in the Console Window

Purpose

Use the Console window to type Dimensions commands. You can also use the window to see the commands that are sent to the Dimensions server as the result of actions you take using the desktop client, and to see the results of those commands.

Whenever you perform an action that causes a command to be processed by the Dimensions database, the command that is generated appears in the console window. For a complete description of Dimensions commands, see the *Command-Line Reference Guide*.

Permissions

No permissions required.

To type commands in the console window:

1   If the console window is not visible, select View | Console.

2   Do any of the following:

■ **To type a single-line command**, click in the window and type the command syntax.

■ **To type a multi-line command**, press Ctrl+Enter to start a new line.

■ **To redisplay the previous command**, type a period (.).

■ **To copy and paste a command** from elsewhere in the Console window, use Ctrl+C or Ctrl+Ins to copy the command and Ctrl+V or Shift+Ins to paste it.

- **To insert the contents of a command file**, type an 'at' sign (@) followed by the name of the file.

3 To submit the commands in the window, press Enter.

4 To clear the contents of the window, click the Clear button:

To save or print the contents of the console window:

Do any of the following:

- **To copy the contents** to the Windows clipboard, select text, and click the Copy button:

- **To save the contents to a file**, click the Save button: . In the Save As dialog box, navigate to the folder where you want to save the file, type a filename, and click the Save button.

- **To print the contents**, click the Print button:

To move the console window:

Do one of the following:

- **To float the window** above the main window, press Ctrl, and drag the Console window title bar away from its location at the top or bottom of the main window.

- **To dock the window**, drag it above or below the main window.

- **To float the window** in the main window together with the other windows, right-click and select **Float in Main Window**. This option is disabled if Workspace Tab Mode, on the User Interface tab of the Preferences dialog box, is set to Tab per window. See for details.

Working with Filtered Views

Purpose

Use the Filtered Views section of the Display bar to display the various search features available in Dimensions. There are three tabs on the Filtered Views section:

■ The Local tab contains an icon for each object filter you have previously defined and saved using the Find mechanism. For further details, see "Finding Objects" on page 103. These are stored in the registry on your local machine.

■ The User tab contains an icon for each user list you have created using the Edit User List function. For further details, see "Managing Custom Lists" on page 162.

■ The Web tab contains an icon for each stored query for your Dimensions user. These are queries that you have created using the Dimensions web client and they are stored on the server. For further details, see "Creating and Using Object Filters" on page 73.

Open the various content windows that enable you to work with Dimensions objects. You can choose to always have the Display bar visible, to hide it, or to float it in the main window with any content windows you have open. You can also choose to display large or small icons to represent the available views.

Permissions

No permissions required.

To access filtered views:

Click the Filtered Views button on the Display bar.
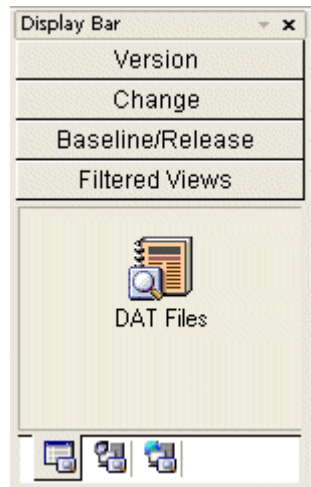
To access object filters:

Click the Local tab:

Do one of the following:

- **To display the result of the object filter,** click the icon for the filter.

- **To edit the object filter,** right-click its icon, select Edit, and complete the Find dialog box.

- **To delete the object filter,** right-click its icon and select Delete.

To access user lists:

Click the User tab:

Do one of the following:

- **To display the user list,** click the icon for the user list.

- **To delete the user list,** right-click its icon and select Delete.

To access web client queries:

Click the Web tab:

Do one of the following:

- **To display the query,** click its icon.

- **To edit the query**, right-click its icon, select Edit, and complete the web client Log in dialog box with your log in details. Click the Query tab in the web client, and edit the query as described in the web client online help.

- **To delete the query**, right-click its icon and select Delete.

Viewing Object Properties

Purpose

Use the Properties window to get a quick view of the basic attributes of a selected object. The attributes displayed in the Properties window can be customized using the Properties tab of the Customize dialog box. Details of how to do this are described in "Customizing the Properties Dialog Box" on page 468.

Permissions

No permissions required.

To view object properties:

1   In an object list or object tree, select an object.

2   Select View | Properties.

3   Do any of the following:

- **To float the Properties window** above the main window, click the Pin button:

- **To dock the Properties window** to the main window, right-click it and select **Docking view**.

- **To undock the Properties window** from the main window, right-click it and deselect **Docking view**.

- **To keep the Properties window open** above all windows in all open applications, right-click it and select **Always on top**.

- **To open an additional Properties window** for the same object, right-click it and select **Copy**.

4 When you are finished, click the window Close button: ✖

About Object Specification

Every object in Dimensions has an object specification that uniquely identifies it. The object specification is displayed in most of the dialog boxes in the desktop client. In addition, for some dialog boxes, you can type the object specification.

The syntax for object specification is as follows:

Object Type	Specification
Design part	*productID*:*partID.variant;pcs*
Item	*productID*:*itemID.variant-itemType;revision*
Change document	*productID_changedocType_number*
Workset	*productID*:*worksetID*
Baseline	*productID*:*baselineID*
Release	*productID*:*releaseID*
Customer	*customerID*

Finding Objects

Purpose

You can search for objects using the Find command. You can display the found objects in a content window, where you can select them and perform tasks on them. If you frequently perform a particular search, you can save the search criteria as a filter that you can run at any time.

You can also search for items by searching for specific words contained in an item revision. For more information, see "Searching and Replacing Text in Items" on page 104.

Permissions

No permissions required.

To find an object:

1   Select Edit | Find, and select the type of object. For example, to search for a change document, select Edit | Find | Change Document.

2   In the Find dialog box, select criteria to limit the number of objects found. For more information about the criteria on each tab, click the Help button in the dialog box.

> **TIP** You can quickly search for all objects of a particular type by clicking the Find Now tab without setting any criteria.

3   To display the list of objects that meet your search criteria, click the Find Now tab.

4   On the Find Now tab, select one or more objects.

5   To display the selected objects in a content window, click Open.

6   To close the Find dialog box, click the Close button.

Searching and Replacing Text in Items

Purpose

You can search for items by text they contain, and search for and replace text in items. You can use regular expressions containing "%" as a wildcard. (This only works for text strings, and not for binary files.) When you replace text in an item, the item is updated and a new revision is created.

Permissions

To replace text, you must have a role that enables you to action items from the initial lifecycle state to a new state.

To search for text in items:

1 Select Edit | Find | In Files.

2 In the **Find What** field, type a search string.

3 Limit the items to search by doing any of the following:

   ■ To search only items in a workset directory, in the **In Work Set Directory** field, type a directory name.

   ■ To search only items related to a particular change document, click the Advanced button, and in the **Related Change Document** field, type a change document specification.

   ■ To search only items in a particular design part, in the **Related Design Part** field, type a design part specification.

4 To further limit the items to search, set values in the remaining controls in this dialog box. For more information about the controls, click the Help button.

5 Click the Find button.

6 In the Find in Files Results dialog box, select one or more items.

7 To display the selected items in a content window, click the New Window button.

8   To close the Find in Files Results dialog box, click the Close
    button.

To search and replace text in items:

1   Select Edit | Find | In Files.

2   In the **Find What** field, type a search string.

3   Select the **Replace with** check box and type the replacement
    string in the field.

4   Limit the items to search by doing any of the following:

    ■ To search only items in a workset directory, in the **In Work
       Set Directory** field, type a directory name.

    ■ To search only items related to a particular change
       document, click the Advanced button, and in the **Related
       Change Document** field, type a change document
       specification.

    ■ To search only items in a particular design part, in the
       Related Design Part field, type a design part specification.

5   In the **Comment on extract** field, type the reason for the text
    replacement.

6   Click the Find button. The Find in Files Results dialog box
    shows the items in which text was replaced. The revision
    numbers of the items are changed according to your process
    model rules.

Creating and Using Object Filters

Purpose   Create and use filters to reduce the number of objects that are
                   displayed in a content window. A filter is a set of search criteria
                   that you use to locate and display objects that match your criteria.

You create a filter by using the Find dialog box to specify search criteria, and then saving the criteria as a filter that you can run at any time.

Permissions   No permissions required.

To create a filter:

1   Select Edit | Find, and select the object type. For example, to search for baselines, select Edit | Find | Baseline.

2   In the Find dialog box, select criteria to limit the number of objects found. For more information about the criteria on each tab, click the Help button.

3   Click the General tab, and click the Create button next to the **Filter Sets** list.

4   For **Enter the name of the new Filter Set**, type a name for the filter.

5   Select the **Based Upon Current Set** check box, and click the OK button. In the Find dialog box, you see the new filter in the **Filter Sets** list. To save the filter in the Filtered Views, click Save.

6   Click the Close button.

To use a filter:

1   In the Display bar, click Filtered Views.

2   Click the icon for a previously saved filter. You see the objects that meet the search criteria in the content window.

To modify a filter:

1   Select Edit | Find, and select the object type. For example, to search for items, select Edit | Find | Item.

2   From the **Filter Sets** list, select a filter. You see the Find dialog box with the filter's criteria.

3   Set additional criteria, or change the existing criteria. For more information about the criteria on each tab, click the Help button.

4   Click the Save button.

To delete a filter:

1   Select Edit | Find, and select the object type.

2   From the **Filter Sets** list, select a filter.

3   Click the Remove button.

About Editing Object Attributes

An object can have attributes in a number of different formats. Attributes can contain text, a number, a date, or a value that you select from a list.

The following table describes how to edit object attributes.

For this type of control...	Do this...
Text field Attributes / Values Lines of Code	Click the field and type text. If the field allows multiple lines of text, text wraps to the next line. To start a new line, press ENTER.
Selection list Severity / 3	Click the down arrow, and select a value from the list.

For this type of control...	Do this...
Multiple value field	Click the down arrow, and select a value from the list, or enter a value for a text field. To add another value, click the Add button, and complete the new field.
	To delete a value, select it and press DELETE.
Multiple column multiple value	In each column, click the down arrow, and select a value from the list or enter a value for a text field. To add another row, click the Add button, and complete the details for that row.
	To delete a value, select it and press DELETE.
Date and time field	Click the field, and type a date in the following format:
	dd-mon-yyyy [*hh:mm:ss*]

Relating and Unrelating Objects

Purpose

Relate objects when you want to show a connection between them. You can relate an object to several other objects. For example, a change document might be related to several item revisions.

You can relate objects by using the Relate/Unrelate menu command for each object type. You can also relate objects by

dragging the object to be related onto another object in a content window.

Permissions

To create this relationship...	You must have these permissions...
Item to item	The item must be in your Pending list, or you must be a Product Manager.
Item to change document	You must have a role on the product that owns the change document.
Item to design part	The item must be in your Pending list, or you must be a Product Manager.
Change document to change document	You must have a role on the product that owns the change documents.
Change document to design part	The change document must be in your Pending list, or you must be a Change Manager.
Design part to design part	You must have the PCMS_PART_MANAGER role for the design part, or be a Product Manager.
Change document to baseline	To relate as *Affected* or *In Response to*, the change document and the baseline must both be in your Pending lists, or you must be a Change Manager. No special permissions are required to relate as *Info*.
Release to customer	You must be the Product Manager for the product that owns the release.

To view related objects:

1 In a content window, select an object in the left-hand window. The related objects are shown in the related object

windows on the right-hand side. The type of relationship an object has with the selected object is indicated by its icon.

| Icon	Description
	A right-pointing arrow indicates that the object has a parent relationship toward the selected object.
	A left-pointing arrow indicates that the object has a child relationship toward the selected object.
	A design part that has a reusage relationship toward the design part above it.

To relate objects:

1 In a content window, do one of the following:

- **To relate an item to an object**, select the item, and select Item | Relate/Unrelate.

- **To relate a change document to an object**, select the change document, and select ChangeDoc | Relate/Unrelate.

- **To relate a baseline to an object**, select the baseline, and select Baseline | Relate/Unrelate.

- **To relate a design part to an object**, select the design part, and select Part | Relate/Unrelate.

- **To relate a workset to an object**, select the workset, and select Workset | Relate/Unrelate.

- **To relate a release to a customer**, select the release, and select Release | Forward.

2 On the Relate and Unrelate tab, for **Show Objects of Type**, select the type of object.you want to relate

The objects of that type currently related will be shown in the Relate list.

3 Click the Add button.

4 In the Find dialog, select criteria to limit your search. For more information, see "Finding Objects" on page 103.

5 To display the results of your search, click the Find Now tab.

6 On the Find Now tab, select one or more objects, and click the OK button. The object(s) will now be added to the **Related** list.

7 In the Related list, select one or more of the object(s) you have found.
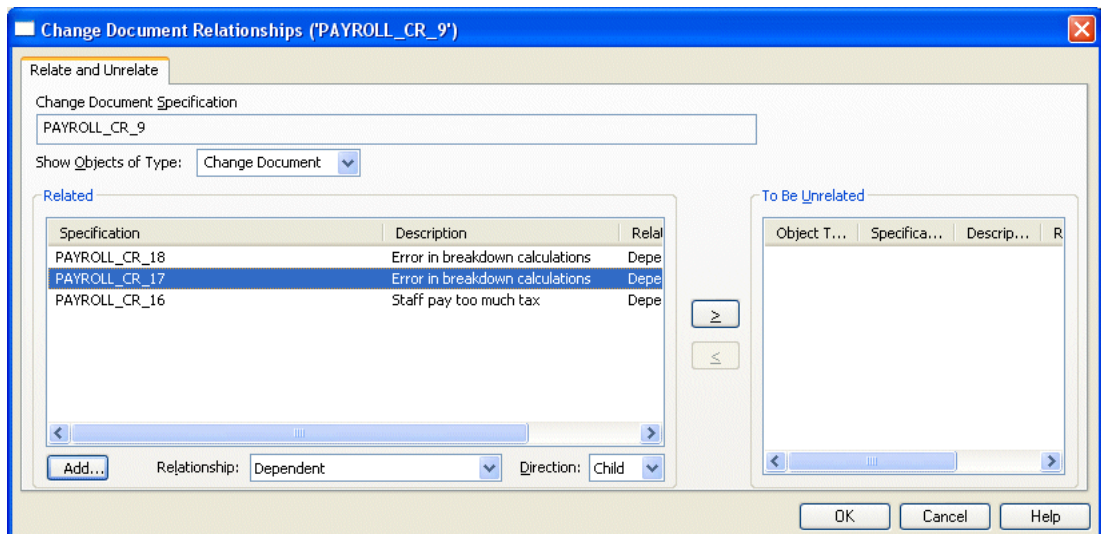
8   For **Relationship:**, select the relationship type and for **Direction**, the relationship direction. Depending on the types of objects you are relating, the **Relationship** or **Direction** field may be grayed out.

9   To relate the objects, click the OK button.

To relate objects by dragging and dropping:

1   Select Tools | Preferences.

2   In the Preferences dialog box, click the Miscellaneous tab.

3   Under **Drag & Drop**, select **Always enable user input**, and click OK.

Setting this option displays the Relationships dialog box when you drag an object onto another object in a content window.

4   In a content window, drag one object and drop it on another object.

You see the Relationships dialog box. You can drag additional objects from the content window into the dialog box.

5   In the Related list, select one or more of the objects.

6   For **Relationship:**, select the relationship type and for **Direction**, the relationship direction.

Depending on the types of objects you are relating, the **Relationship** or **Direction** field may be grayed out.

7   To relate the objects, click the OK button.

To unrelate objects:

1   In a content window, do one of the following:

■   **To unrelate an item from an object**, select the item, and select Item | Relate/Unrelate.

- ■ **To unrelate a change document from an object**, select the change document, and select ChangeDoc | Relate/Unrelate.

- ■ **To unrelate a baseline from an object**, select the baseline, and select Baseline | Relate/Unrelate.

- ■ **To unrelate a design part from an object**, select the design part, and select Part | Relate/Unrelate.

- ■ **To unrelate a workset from an object**, select the workset, and select Workset | Relate/Unrelate.

- ■ **To unrelate a release from a customer,** select the release, and select Release | Withdraw.

- ■ To break a release relationship, select Release | Withdraw.

2 On the Relate and Unrelate tab, for **Show Objects of Type**, select the type of the related object. You see all currently related objects of that type in the **Related** list
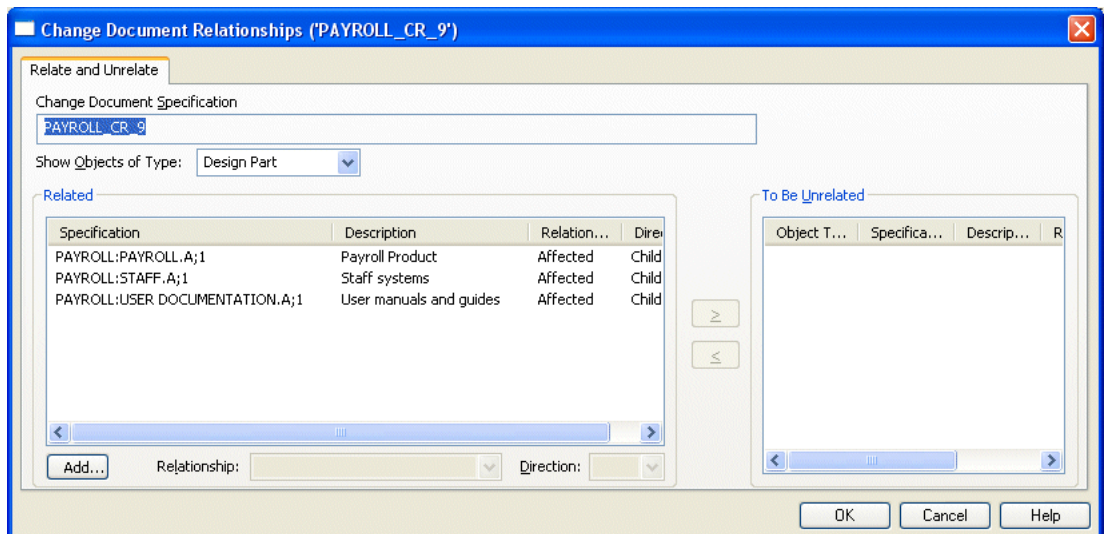
3 In the **Related** list, select the object(s) you want to unrelate.

4 To move the object(s) to the **To Be Unrelated** list, click the right arrow button:

> **5** To unrelate the objects in the **To Be Unrelated** list, click the
> OK button.

About the Pedigree Window

The Pedigree window shows the history of an object and the
objects created from it.

For items, the Pedigree window shows how item revisions are
related in time and origin. For example, you can see which
revision was used to create a new branch.
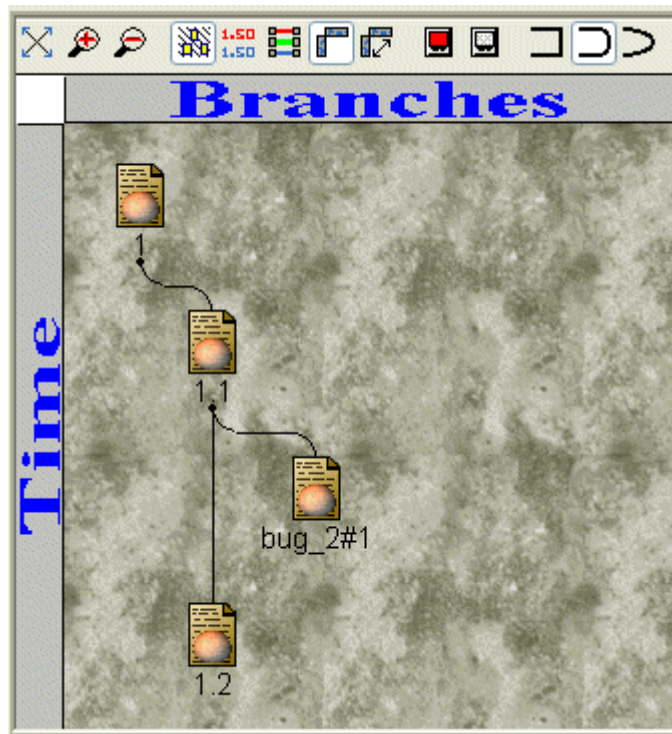
For baselines and worksets, the Pedigree window shows how
worksets, baselines, and releases are related in time and origin.
For example, you can see which worksets were included in a

baseline and which baseline was used to create a release. The Pedigree window also shows which releases were forwarded to a customer.
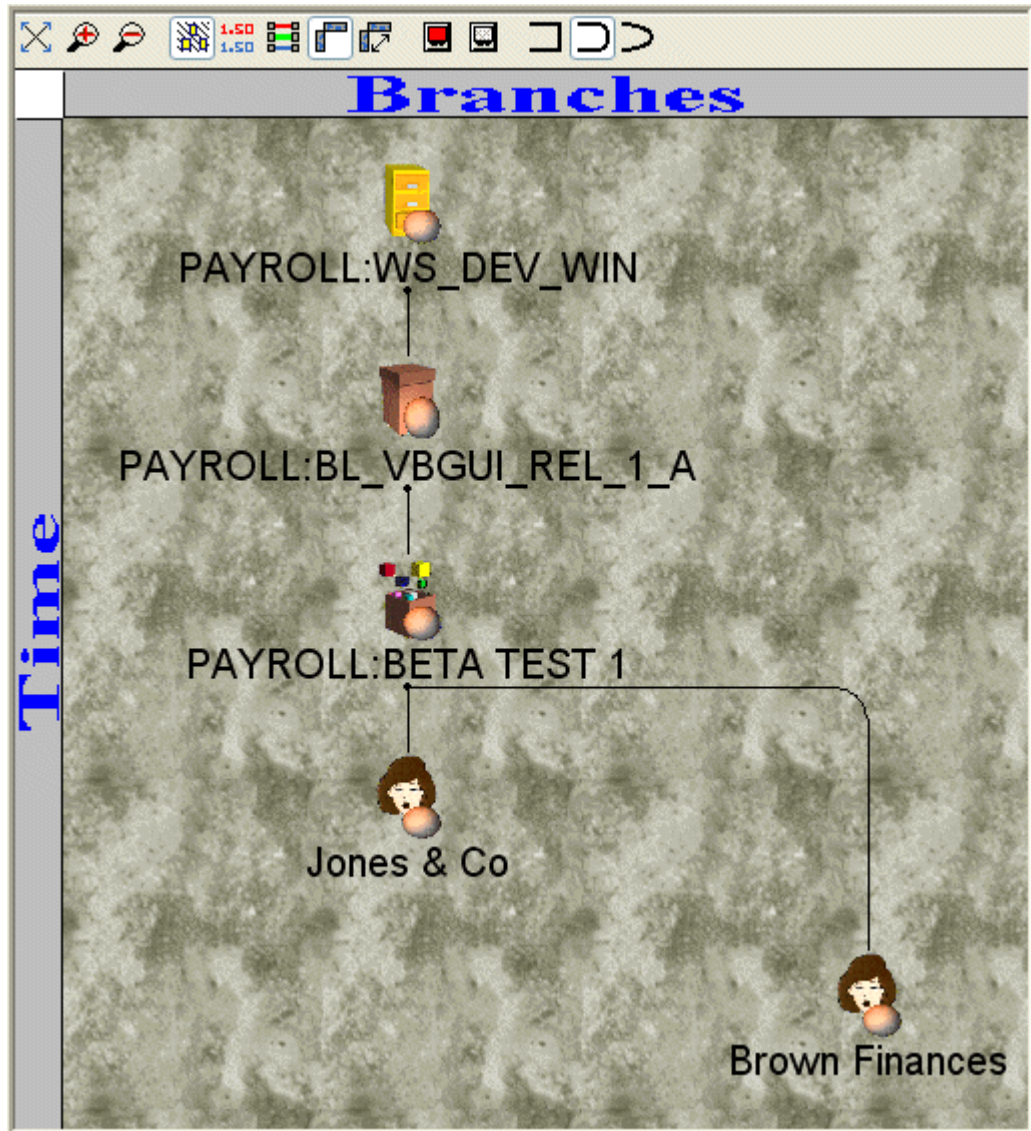
The Pedigree window displays the following icons:

Icon	Description
	Item
	Workset
	Baseline
	Release
	Customer

Working in the Pedigree Window

Purpose

Use the Pedigree window to see how objects are related in time and origin. You can view the pedigree of items, worksets, and baselines (which shows related releases). You can also select an object in the Pedigree window to perform some tasks with it, such as checking it out.

Permissions

No permissions required.

To open the Pedigree window:

Do one of the following:

■   In an Items list, select an item, and select Item | Pedigree.

■ In a Worksets list, select a workset, and select Workset |
Pedigree.

■ In a Baselines list, select a baseline, and select Baseline |
Pedigree.

To change the appearance of the Pedigree window:

Use this button...	To do this...
	Resize the pedigree to fit the window
	Magnify or reduce the pedigree
	Show or hide the window background
	Change the color of the text
	Change the color of the connecting lines
	Show or hide the time and branch axes
	Switch the time axis and branch axis
	Select all objects
	Deselect all objects
	Use straight connecting lines
	Use rounded connecting lines
	Use arc connecting lines

Using Shortcuts

Purpose   Use shortcuts to work more quickly. You can use the right-click
menu for objects to quickly access the most common object
commands. You can use the keyboard to access menu commands
and to navigate through dialog boxes. You can also use keyboard
shortcuts for common Dimensions commands.

Permissions   No permissions required.

To access commands on the right-click menu:

In a content window, right-click an object, and choose a command from the menu.

To access menu commands using the keyboard:

■ To access a menu command, hold down ALT and type the underlined letter in each menu and submenu for the command.

   For example, to select File | New | New Change Document, press ALT+F+N+C.

■ To navigate a dialog box using the keyboard, press TAB to move focus to the next control, or press ALT and type the underlined letter in the control name.

■ To access a command using a keyboard shortcut, type a shortcut from the following table.

Press	To
Shift+Del	Cut the selected text
Ctrl+Ins	Copy the selected text to the clipboard
Shift+Ins	Paste the clipboard contents
F1	Open the Dimensions Help system
Shift+F1	Context-sensitive help
F2	Toggle the Display bar
Ctrl+Shift+F2	Open the Workset Structure window
F3	Toggle the Console window
Ctrl+Shift+F3	Open the Pending Items window
Ctrl+Shift+F4	Open the Item Catalog window
F5	Refresh the current window
Shift+F5	Refresh all open windows
Ctrl+Shift+F5	Open the Design Part window

Press	To
F6	Move focus to the next content window
Shift+F6	Move focus to the previous content window
Ctrl+Shift+F6	Open the Change Document Catalog window
Ctrl+Shift+F7	Open the Pending Change Documents window
Ctrl+Shift+F8	Open the Workset Catalog window
Ctrl+Shift+F9	Open the Pending Baselines window
Ctrl+Shift+F10	Open the Baseline Catalog window
Ctrl+Shift+F11	Open the Release Catalog window
Ctrl+Shift+F12	Open the Customer Catalog window
Ctrl+A	Select all the objects in an object list
Ctrl+B	Preview the selected change document
Ctrl+C	Copy the selection to the clipboard
Ctrl+D	Add a change document action description to the selected change documents
Ctrl+Shift+D	Delegate the selected change documents
Ctrl+Shift+F	Toggle full screen view on and off
Ctrl+G	Get the selected items
Ctrl+H	View the history of selected change documents
Ctrl+Shift+H	View the history of selected items
Ctrl+I	Check in the selected items
Ctrl+L	Logoff
Ctrl+O	Check out the selected items
Ctrl+P	Print the contents of the Console window
Ctrl+Shift+P	Display the Properties window
Ctrl+R	Show users and roles for the selected change documents
Ctrl+Shift+R	Show users and roles for the selected items

Press	To
Ctrl+S	Save the contents of the Console window to a file
Ctrl+T	Action the selected change documents
Ctrl+Shift+T	Action the selected items
Ctrl+U	Update the selected items
Ctrl+V	Paste the clipboard contents
Ctrl+W	Change the workset
Ctrl+Shift+W	Change the workset root directory
Ctrl+X	Cut the selected text to the clipboard

5   Managing Changes

In this Chapter

About Change Documents

A *change document* represents a request made against a product. It may capture a defect, enhancement, or other work that needs to be completed on items that belong to the product. You can use change documents to plan, track, authorize, and control all work on the product.

For each type of change document, the process model includes:

■   A project-organization-specific layout and format.

■   System-defined and user-defined attributes.

■   Rules on behavior and relationships between change document types and item types.

■   A lifecycle that maps the organization's process for handling the change document type.

Web client   In the web client, you can perform the following change management tasks:

■   Create a new change document.

■   Relate change documents to items, baselines, other change documents, and design parts.

■   Relate an item to a change document.

■   Edit change document attributes.

■   Add an action description to a change document, or edit an existing description.

■   Add attachments to change documents, or edit an existing attachments list.

■   Action a change document to remove it from your Pending list.

■   Delegate or request ownership of a change document to or from another Dimensions site.

■   Move a change document to a different design part.

■   Preview and print the contents of a change document.

■   View the action history and revision history of a change document.

Desktop client   In the desktop client, you can perform the following change management tasks:

■   Create a new change document.

■   Relate change documents to items, other change documents, and design parts.

■   Relate an item to a change document.

■   Edit change document attributes.

■   Add an action description to a change document, or edit an existing description.

■   Add attachments to change documents, or edit an existing attachments list.

■   Action a change document to remove it from your Pending list.

■   Delegate or request ownership of a change document to or from another Dimensions site.

■   Move a change document to a different design part.

■   Preview and print the contents of a change document.

■   View the action history and revision history of a change document.

■   Show the users and roles for a change document.

About Change Document Lists

When you start Dimensions, you can open any one of the following lists.

- **Held list**. Includes private change documents not yet created (similar to draft emails).

- **Pending list**. Includes change documents assigned to you. Change documents appear on your Pending list based on your role and the life cycle for this change document type as defined in the process model.

- **Primary Catalog list**. Includes all change documents in the Dimensions primary catalog.

- **Secondary Catalog list**. Includes all change documents that have reached the end of their normal lifecycle, or are in an off normal end state. You can transfer change documents to the secondary catalog from the Primary Catalog list, enabling you to tidy up your primary view by moving change documents that no longer active.

  Dimensions preserves relationships to other change documents, design parts and items when change documents are transferred to the secondary catalog.

  You cannot update change documents in the Secondary Catalog list but you can query them.

  Only a user with the role of Change Manager can transfer change documents between the two catalogs. Additional rules govern when a change document can or cannot be transferred.

- **Custom lists**. You create these lists for your own purposes from the Pending list, the catalog list, or other pre-existing custom lists. You can append or remove individual change documents to a custom list. You can delete existing lists and create new ones.

Opening Change Document Lists

Purpose   Use this operation to open a change document list.

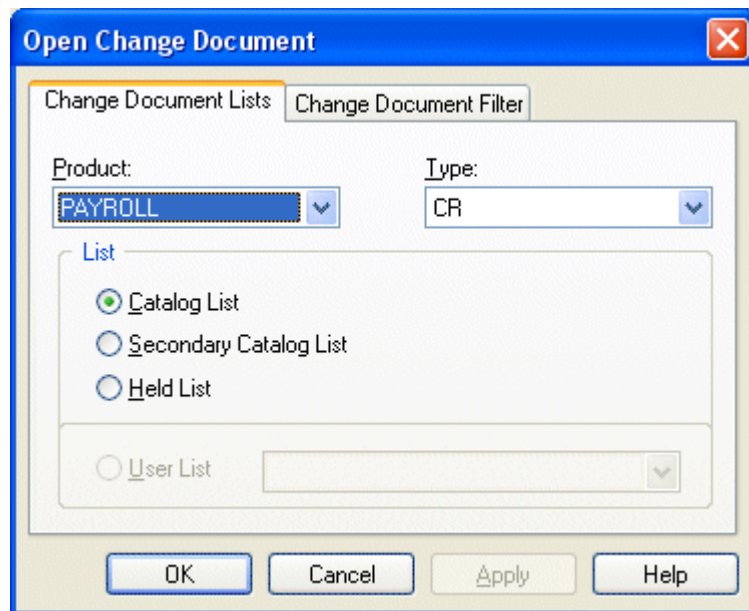Permission   No permissions required.

Desktop client   **To open a change document list:**

1 To open all lists except the Pending list, click the Change
   Document Catalog icon.

Change Document Catalog

The Open Change Document dialog opens.

2 On the Change Document Lists tab, for **Product**, select a
   product.

3 For **Type**, select a change document type.

4 Select one of the following:

- **Catalog List**: This list includes all active change documents to which you have access.

- *Secondary Catalog List:* This list displays all change documents placed in the Secondary Catalog by the Change Manager.

  NOTE In the secondary catalog view, you can only see related change documents if those change documents are also themselves in the secondary catalog.

- **Held List:** This list displays all change documents that you originated and put on hold.

- **User List:** These are lists that you created. Click this button to select a user list.

5 To filter the list that you have selected, click the Change Document Filter tab. For **Change Document ID**, type a filter string consisting of a change document ID containing a "%" as a wildcard character.

6 Click the 🔍 button. The change documents that match the filter string are displayed.
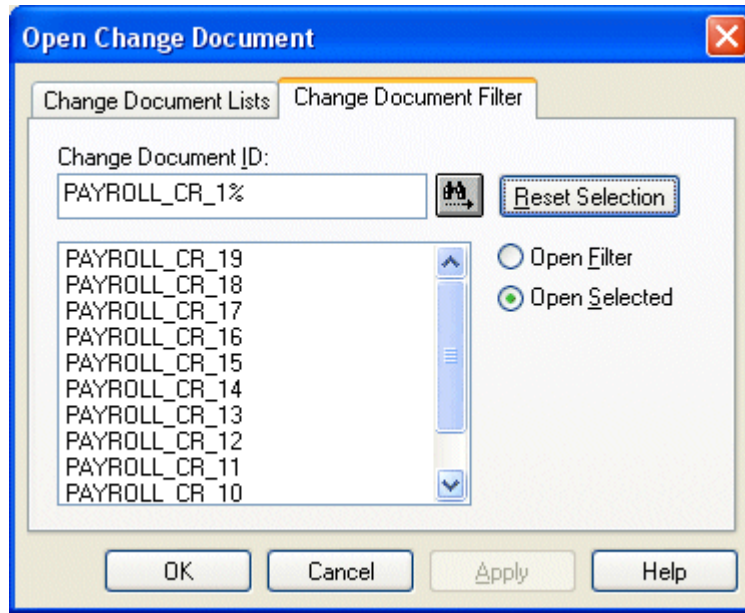
7 To open only a subset of the filtered change documents list, select IDs from the list. To deselect any change documents that you have selected, click the Reset Selection button.

8 Click the OK button.

Selecting a Change Document

Purpose

Select change documents when you want to perform operations on them, such as actioning a change document, or when you want to preview properties or attributes.

You can select a change document to view it, copy it, or action it.

NOTE If the change document is not owned by your site, indicated by a greyed icon, you will only be able to view its details. You will not be able to perform any operations that attempt to update it apart from Request Change Document.

Web client **To select a change document:**

   1 Do one of the following:

   ■ **To select a change document from your Pending list**, click the Pending tab, and click the change document icon:

   ■ **To select from change documents in a workset directory**, click the Change Docs tab, and click a catalog folder.

   2 In the content area, do one of the following:

   ■ **To select a change document**, click the check box next to it: ☑

   ■ **To select all change documents in the list**, click the Select All icon in the column heading:

Desktop client **To select a change document:**

   1 In the Display bar, click Change.

   2 Do one of the following:

   ■ **To select from your Pending list**, click the Pending Change Documents icon:

Pending Change Documents

   ■ **To select from change documents in a design part**, click the Design Part Structure icon:

Design Part Structure

■ **To select from all change documents in the product,** click the Change Document Catalog icon:

Change Document Catalog

3 In a Change Document list, do one of the following:

■ **To select a single change document,** click the button next to the change document, or click anywhere in the row containing the change document.

■ **To select multiple change documents,** Ctrl+click each change document.

■ **To select a range of change documents,** click the first change document in the range, then SHIFT+click the last change document.

■ **To select all change documents in the list,** click the blank column heading, or click anywhere in the content window and type Ctrl+A.

Creating a Change Document

Purpose

When you create a change document, it is added to the repository and assigned to the initial lifecycle state.

New change documents are initially added to your Held list and assigned the status *To Be Defined*. You can leave a change document on your Held list if you don't have all the necessary information when you create it. As the originator, only you have access to a change document while it is on your Held list. It remains in your Held list until you submit it.

> **TIP** You can also create a change document by priming it, which means creating a change document based on the details of an existing change document. See .

Permissions

By default, all users can create change documents. However, the Product Manager can set a process model flag that prevents you from creating change documents unless you have a role in the product.

Web client

To create a change document:

1   On the Change Docs tab, or the Pending tab with Change Docs selected in the navigation area, click the New button:

2   Select a change document type from the list.

3   For **Title**, type a title.

4   For **Description**, type an explanation of the problem.

5   For **Affected Design Part**, type the design part name, or click Browse and do one of the following:

   a   On the first page of the Select Design Part wizard, click Next.

   b   On the second page, for **Part Spec**, select the design part(s).

   c   Click the Finish button.

6   Optionally, for **Related Baselines**, type the baseline name(s), or click the Browse button to select them.

7   Optionally, in the **File Attachments** field, attach files to the change document.

8   To set attributes, click the Attributes tab, and type or select values.

9   To create the change document, click the Save button.

Desktop client   **To create a change document:**

1   Select File | New | Change Document.

2   On the General tab of the New Change Document dialog box, from the **Product** list, select the product for which you are creating a change document.

3   From the **Type** list, select the change document type.

4   To add the change document to your Held list, select **Put in Held List**.

5   For **Title**, type the change document title.

6   To describe the problem, click **Edit Detailed Description**. Your default editor for this change document type opens. Type an explanation in the editor, and save and close the file.

7   To set attributes, click the Attributes tab, and type or select values.

8   To set relationships, click the Relationships tab, and in each field type or select values.

9   Optionally, to attach files, click the Attachments tab, and type or select filenames.

10   To create the change document, click the Create button.

Priming a Change Document

Purpose   Prime an existing change document to create a new change document.

The new change document can be:

■ Created in the same or a different product.

■ A different change document type.

■ Related to the original change document.

Permissions   By default, all users can create change documents. However, the Product Manager can set a process model flag that prevents you from creating change documents unless you have a role in the product.

Web client   **To prime a change document:**

1 On the Change Docs tab or the Pending tab, select a change document.

2 Click the Prime button on the toolbar and choose a type for the new change document from the list.

3 In the Prime Change Document dialog box, do the following:

■ For **Title**, type a title.

■ For **Description**, type an explanation of the problem.

4   In the **Affected Design Part(s)** field, check the design part(s) that were copied from the originating change document.

5   Optionally, for **Related Baselines**, type the baseline name(s), or click the Browse button to select them.

6   Optionally, in the **File Attachments** field, attach files to the change document.

7   On the Attributes tab, check the user-defined attributes that were copied from the original change document.

NOTE Attributes are only copied if priming rules for the change document type have been configured in the Administration Console.

---

8   Click the Save button.

Desktop client   **To prime a change document:**

1   In a change document list, select a change document.

2 Select ChangeDoc | Prime.

3 On the General tab of the Prime Change Document dialog box, do the following:

■ From the **Type** list, select the change document type.

■ For **Title**, type the change document title.

■ To describe the problem, click **Edit Detailed Description**. Your default editor for this change document type opens. Type an explanation in the editor, and save and close the file.

The **Prime Details** field displays the details of the change document on which the new primed change document is to be based.

4 Click the Relationships tab, and in the **Related Parts** field check the design part(s) that have been copied from the originating change document.

5 Optionally enter or change the related baselines in the **Related Baselines** field.

6 On the Attributes and Attachments tabs, specify any user-defined attributes and file attachments that you require.

7 Click the Create button.

Showing Users and Roles for Change Documents

Purpose   You can view the current role assignments for a change document, and view the users who currently have that change document on their Pending lists.

Permissions   No permissions required.

Desktop client   **To show the users and roles for a change document:**

1 In a change document list, select a change document.

2 Select ChangeDoc | Show Users/Roles.
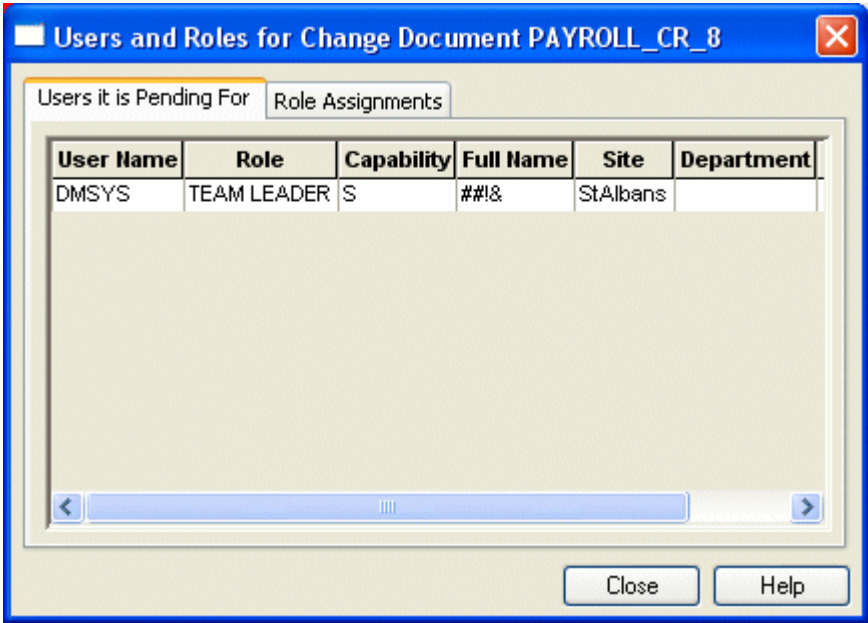
3 To see which users have this change document in their Pending lists, click the Users it is Pending For tab.

4 To see which users are assigned to a particular role for this change document, click the Role Assignments tab.

5 Click the Close button.

Deleting a Change Document

Purpose   Delete a change document when it is no longer needed or when you have created it in error.

Permissions   The change document must be in your Held list, or you must be the Change Manager.

Web client   **To delete a change document:**

    1 On the Pending tab or Change Documents tab, select one or more change documents.

    2 Click the Delete button.

    3 Click the Yes button.

Desktop client   **To delete a change document:**

    1 In a change document list, select one or more change documents.

    2 Right-click and select Delete.

Browsing and Printing a Change Document

Purpose   Browse a change document when you want to view and print a read-only copy of a document.

Permissions   The change document must be in your Pending list, or you must be the Change Manager.

Web client   **To preview and print a change document:**

    1 On the Pending tab or Change Docs tab, select the change document and click the Edit button: , or click the change document name.

2   In the Open Change Document dialog box, click the Preview
tab.

3   To print the change document, use your web browser's
commands.

4   When you have finished viewing the change document, click
Cancel.

Desktop client   **To browse and print a change document:**

1   In a change document list, select a change document.

2   Select ChangeDoc | Browse: 🔲

The change document opens in the default editor for this
change document type.

3   To print the change document, use the editor's commands.

4   When you are finished viewing the change document, exit
the editor.

Actioning a Change Document

Purpose

Action a change document when you want to move a change document to another lifecycle state. *Actioning* moves an object, such as a change document or an item, to another lifecycle state. Only users with the appropriate role for a given state can action to another state.

When you action a change document from your Pending list, it is removed from your list and moved to the Pending list of users who have roles for the next lifecycle state.

Permissions

The change document must be in your Pending list, or you must be the Change Manager. It must also be owned by your site. Further restrictions may allow just the lead user to action the object, or allow other users to add only action descriptions.

NOTE When you action a change document to or from a lifecycle state that is sensitive, thus requiring an electronic signature, you will be presented with an Authentication Point dialog box. In this case, enter your Dimensions password and click OK.
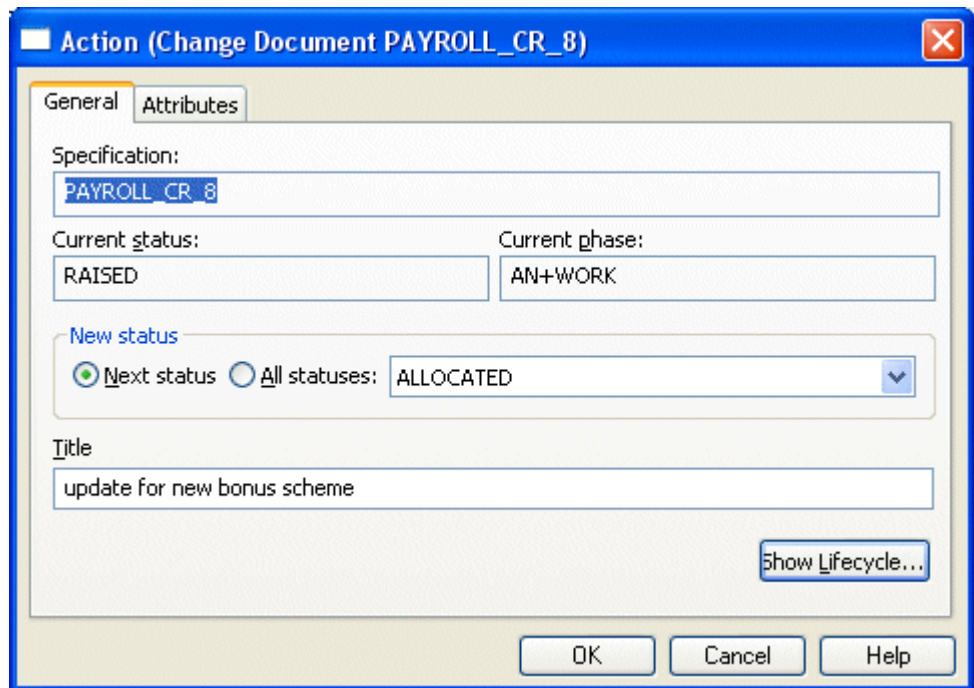
Web client

To action a change document:

1 From the Pending or Change Docs tab, select one or more change documents.

2 Click the Action button:

3 For **Action to**, to select a life cycle state, do one of the following:

■ If you are actioning a single change document, check that the lifecycle state is selected.

■ If you are actioning multiple items, select **Next normal state,** or select **Named state** and type a life cycle state. You must type a lifecycle state that is common to all the change documents you selected.

4 Optionally, in the **Reason for action** field, type a comment.

5 To set attributes, click the Attributes tab and type or select values.

6 Click the OK button.

Desktop client   **To action a change document:**

1 In a change document list, select one or more change documents.

2 Select ChangeDoc | Action or click the Action Change Document button:

Action (Change Document PAYROLL_CR_8)

General | Attributes

Specification:
PAYROLL_CR_8

Current status: Current phase:
RAISED   AN+WORK

New status
⦿ Next status ○ All statuses: ALLOCATED ⌄

Title
update for new bonus scheme

Show Lifecycle...

OK   Cancel   Help

verify the values that are pre-populated.

3 For **New Status**, select the next lifecycle state, or leave it blank to action the change document to the next normal lifecycle state.

If you are a Product Manager and want to action the change document to any lifecycle state, click the **All Statuses** option, and then select a lifecycle state.

4 Optionally, for **Title**, edit the title of the change document.

5 To set attributes, click the Attributes tab and type or select values. Attributes in bold are required. Attributes in italics cannot be modified.

6 Click OK.

Adding an Action Description to a Change Document

Purpose Use this operation to add an action description to a change document.

Permissions You must have a role to action the change document, or you must be the Change Manager. It must also be owned by your site.

Web client **To add an action description:**

1 From the Pending or Change Docs tab, select one or more change documents.

2 Click the Action Description button:

3 For **Reason for Action**, type the action description, and click the OK button. The description is appended to any previous action descriptions for the change document.

To view all the action descriptions for a change document:

1 On the Pending tab or Change Docs tab, select a change document and click the Edit button: , or click the change document name.

    2 In the Edit Change Document dialog box, click the Preview tab.

    3 Scroll down to the Action Message field.

Desktop client   **To add an action description:**

    1 In a Change Document list, select a change document.

    2 Select ChangeDoc | Add Action Description.

    3 In your default editor, type a change document action description.

    4 Save the file and exit the editor. The description is appended to any previous action descriptions for the change document.

Moving a Change Document

Purpose   Use this operation to move a change document from the main catalog to the secondary catalog, or from the secondary catalog to the main catalog.

Permissions   You must have the change document in your Pending list, or you must be the Change Manager. It must also be owned by your site.

Desktop client   **To move a change document:**

    1 In a change document list, select a change document.

    2 Select ChangeDoc | Move To | Main Catalog or ChangeDoc | Move To | Secondary Catalog.

    3 Click the OK button. The results of the move are displayed in the Console window. If you can't move the change document, an error message is displayed.

About Editing Change Documents

You can edit the description, attributes, or relationships of change documents that are in your Pending list. The rules defined in the process model determine whether you can edit a change document at any state in its lifecycle.

Edits to change documents may have been restricted in your process model. When a change document is pending for a group of users, only those who are assigned the leader role or the Change Manager can edit the change document attributes; others may only add action descriptions.

The change document must be owned by your site in order for you to edit it.

You can edit change documents in the following ways:

- Edit the description of a change document. See page 145 for details.

- Edit the list of files attached to a change document. See page 150 for details.

- Edit the attributes of a change document. See page 152 for details.

- Edit the action description of a change document. See page 145 for details.

- Unrelate currently related design parts, items, or other change documents. See "Relating and Unrelating Objects" on page 108.

Editing a Change Document Description

Purpose	Use this operation to edit a change document's detailed description.
Permissions	The change document must be in your Held list or you must be a Change Manager. It must also be owned by your site.
Web client	**To edit a change document's description:**

1. On the Pending tab or Change Docs tab, select a change document and click the Edit button: , or click the change document name.

2. In the Edit Change Document dialog box, on the General tab, edit the **Description** field.

3. Click Save.

Desktop	**To edit a change document's description:**

1. In a change document list, select a change document.

2. Select ChangeDoc | Edit | Detailed Description.

3. In your default editor, edit the detailed description, save the file, and exit the editor.

Editing a Change Document Action Description

Purpose	Use this operation to edit a change document's action description.
Permissions	The change document must be in your Held list or you must be a Change Manager. It must also be owned by your site.

Desktop   **To edit a change document's action description:**

   1   In a change document list, select a change document.

   2   Select ChangeDoc | Edit | Action Description.

   3   In your default editor, edit the action description, save the file, and exit the editor.
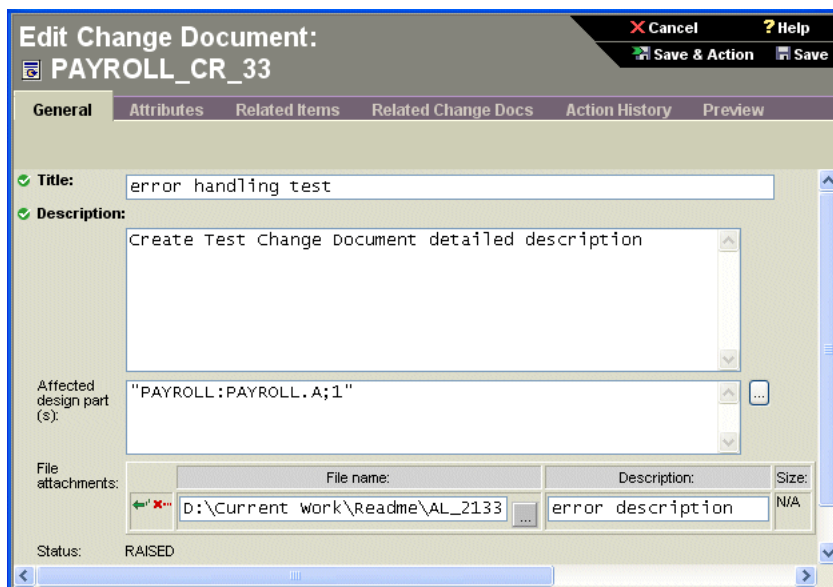
Attaching Files to Change Documents

Purpose   Attach files to include documents with information on the change document.

Permission   You must either have the change document in your Pending list, or you must be a Change Manager. It must also be owned by your site.

Web client   **To attach files to change documents:**

     1 On the Pending or Change Docs tab, select a change document and click the Edit button: , or click the change document name.

     2 For **File attachments**, in the **Filename** field, do one of the following:
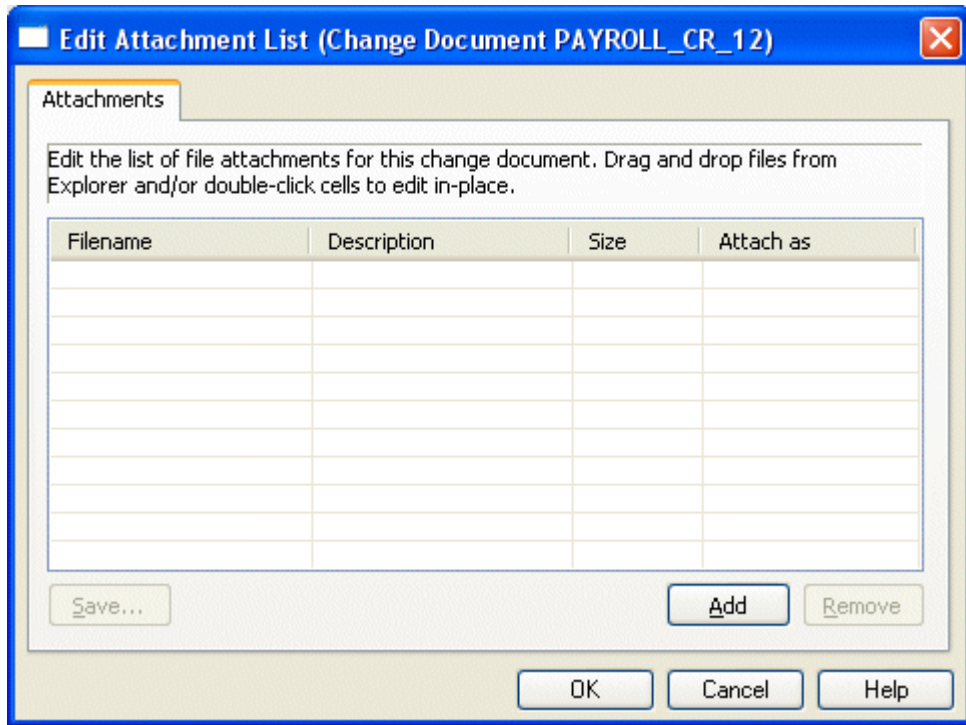
       ■ Type the path and filename.

       ■ Click the Browse button: and select a file.

     3 In the Description field, type a description for the attachment. If you do not add a description, Dimensions adds the following default text:
Attachment created <date> by <user ID>

     4 To add another attachment, click the Insert Row button: ⬅' and repeat steps 2–3.

     5 Do one of the following:

User's Guide

■ To save changes, click the Save button: 🖫 **Save**

■ To save changes and action the change document to its
next normal state, click the Save & Action
button: ⚡ **Save & Action**

Desktop client   **To attach files to change documents:**

1   In a change documents list, select a change document.

2   Select ChangeDoc | Edit | Attachment List.

3   Do one of the following:

■ Click the Add button, or double-click the first empty cell in
the **Filename** column, and do one of the following:

• Type the filename.

• Click the Browse button: ⋯ and select the file.

■ In Windows Explorer, drag and drop a file onto the attachments list.

4 Double-click in the **Description** field, and type a description for the attachment. If you do not add a description, Dimensions adds the following default text:
Attachment created <date> by <user ID>

5 Repeat steps 3–4 for each file that you want to attach.

6 Click the OK button.

Viewing and Saving Change Document Attachments

Purpose   Use this operation to view the contents of change document attachments or to save copies to your local working area.

Permissions   No permissions required.

Web client   **To view and save change document attachments:**

1 On the Pending or Change Docs tab, select a change document and click the Edit button: , or click the change document name.

2 In the **File Attachments** field, click an attachment's filename or its icon . The file opens in the default application for the file type.

3 To save the file, use the application's commands.

Desktop   **To view and save change document attachments:**

1 In a change document list, select a change document.

2 Select ChangeDoc | Browse Attachments.

3 Do one of the following:

- To browse an attached file, select its row and click OK. The file opens in the default application for the file type, and the Browse Attachments dialog box closes.

- To save a copy of an attached file, select its row, and click the Save button. Navigate to a folder, and click the Save button in the Save As dialog box.

Editing a Change Document Attachment List

Purpose | Use this operation to edit the list of files attached to a change document.

Permissions | You must have a role to action the change document, or you must be a Change Manager. It must also be owned by your site.

Web client | **To edit a change document attachment list:**

1 On the Pending or Change Docs tab, select a change document and click the Edit button: , or click the change document name.

2 On the General tab, to change the description of an attachment, click its **Description** field and type the new description.

3 To delete an attachment, click its Remove Row button: ✖⋯

4 To add a new attachment, click the Insert Row button: ↵ and in the **Filename** field, do one of the following:

- Type the path and filename.

- Click Browse ⬚ and select a file.

Add a description for the attachment. If you do not add a description, Dimensions adds the following default text:

Attachment created <date> by <user ID>

5 Do one of the following:

■ To save changes, click the Save button: ⊞ Save

■ To save changes and action the change document to its next normal state, click the Save & Action button: ⊞ Save & Action

Desktop   **To edit a change document attachment list:**

1 In a change document list, select a change document.

2 Select ChangeDoc | Edit | Attachment List.
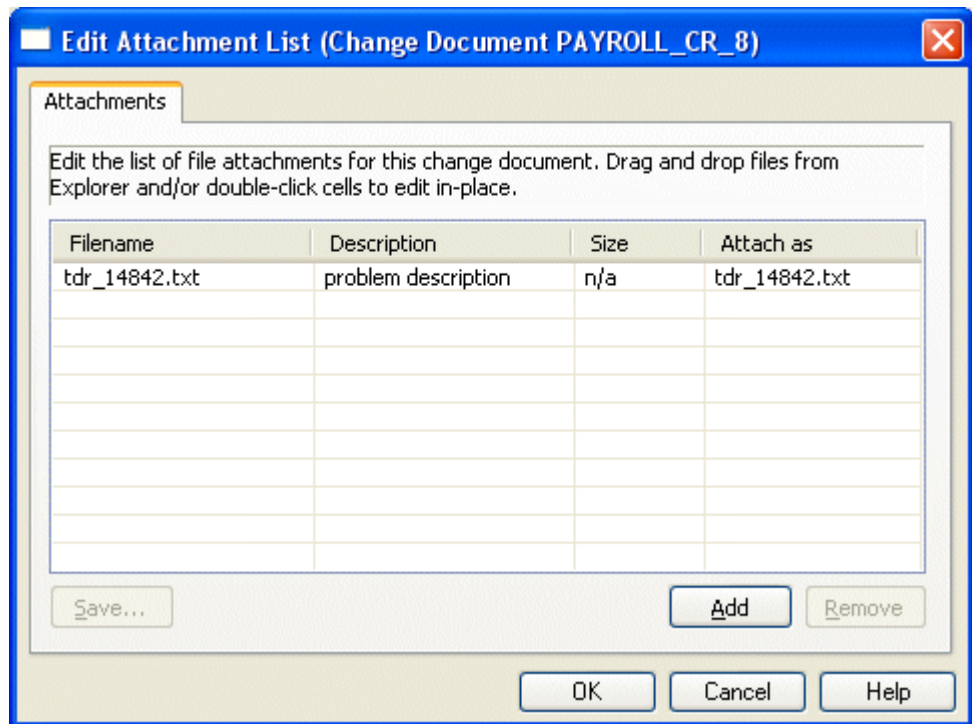
3 To change the description of an attachment, double-click its **Description** field and type the new description.

4 To remove an attachment, select its row and click the Remove button.

5   To add a new attachment, do one of the following:

■ Click the Add button, or double-click the first empty cell in the **Filename** column, and do one of the following:

• Type the filename.

• Click the Browse button: ⬚ and select the file.

■ In Windows Explorer, drag and drop a file onto the attachment list.

Add a description for the attachment. If you do not add a description, Dimensions adds the following default text: *Attachment created <date> by <user ID>*

6   Click the OK button.

Editing the Attributes of a Change Document

Purpose   Edit change document attributes to set or change attribute values.

Permission   The attribute update rules defined in the process model determine which attributes you can edit. The change document must be owned by your site.

NOTE When you edit an attribute that is sensitive, thus requiring an electronic signature, you will be presented with an Authentication Point dialog box. In this case, enter your Dimensions password and click OK.
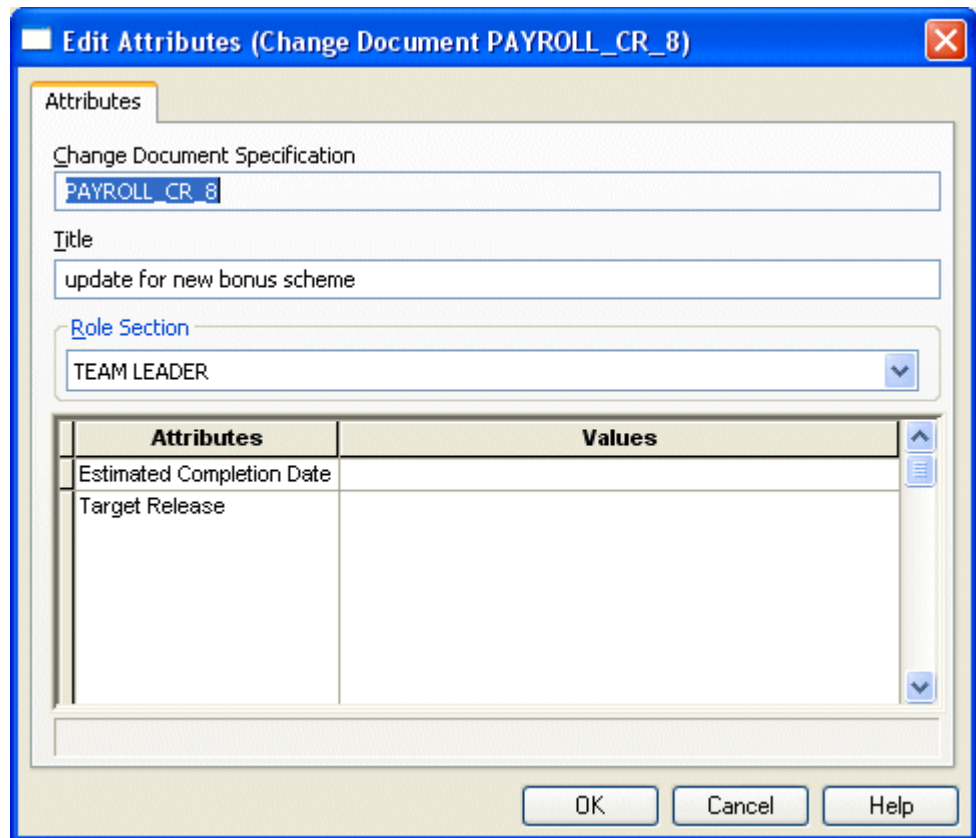
Web client   **To edit change document attributes:**

1   On the Pending or Change Docs tab, select a change document and click the Edit button: 🔖 , or click the change document name.

2 In the Edit Properties dialog box, click the Attributes tab, and type or select values. Required attributes are marked with a red exclamation point:

3 Click the Save button.

Desktop client   **To edit change document attributes:**

1 In a catalog list, select a change document.

2 Select ChangeDoc | Edit | Attributes.

3 On the Attributes tab, type or select values. Attributes in bold are required. Attributes in italics cannot be modified.

4 Click the OK button.

Delegating a Change Document

Purpose
: Delegate a change document when you want to assign a change document to another user. When you delegate a change document, you change the role assignments for it. You can also delegate the change document to another Dimensions site.

: For more information about roles and role responsibilities, see "About Roles and Permissions" on page 37.

Permissions
: The change document must be in your Pending list, or you must be a Change Manager. In addition, your process model must define a list of candidate users. The change document must also be owned by your site.

Web client
: **To delegate a change document:**

1 On the Pending or Change Docs tab, select one or more change documents.

2 Click the Delegate button:
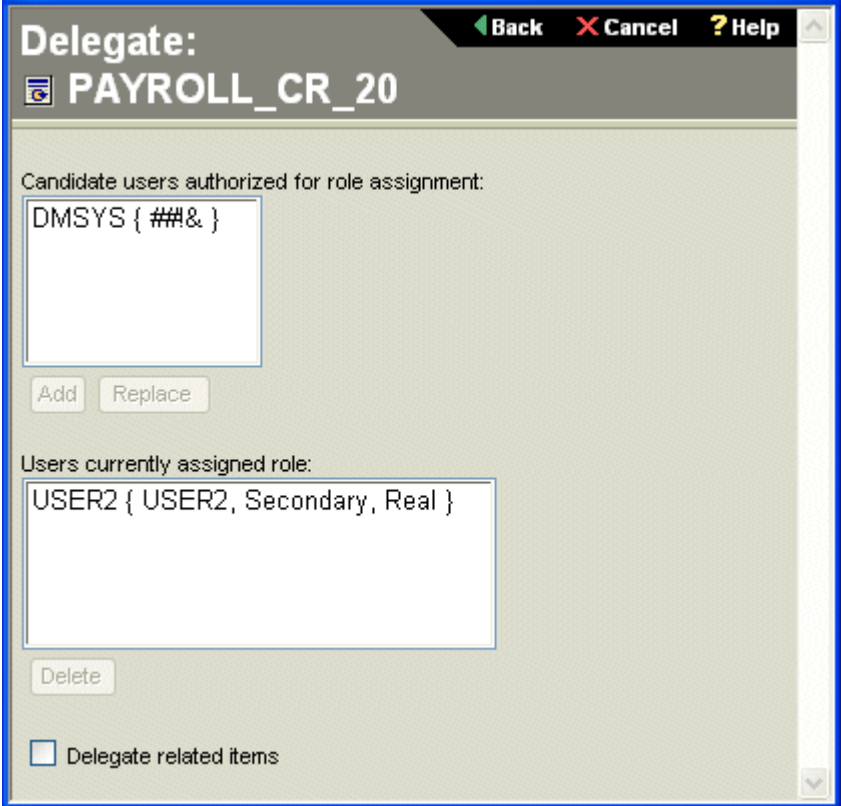
3 In the first page of the Delegate wizard, select the **Capability** and the **Role to Delegate**.

4 Click the Next button: ✔ **Next**

5 Do one of the following:

■ To add a user, select the user in the **Candidate users authorized for role assignment** list, and click the Add button.

■ To delete an assigned user, select the user in the **Users currently assigned role** list, and click the Delete button.

■ To replace an assigned user, select the new user in the **Candidate users authorized for role assignment** list, select

the user you want to replace in the **Users currently assigned role** list, and click the Replace button.

6   If you want to also delegate the related items, select **Delegate related items**.

7   To close the Delegate Wizard, click Cancel.

Desktop client   **To delegate a change document:**

1   In a change document list, select one or more change documents. You can select multiple change documents if they belong to the same product.

2   Select ChangeDoc | Delegate or click the Delegate Change Document button:

    Select the Roles tab if this is not displayed
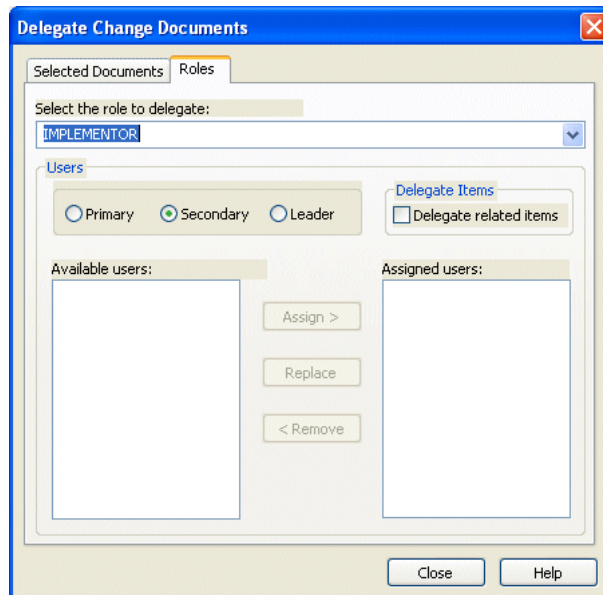
3   From the **Select the role to delegate** list, select the role that you want to delegate.

4   For Users, select the level of responsibility for the role:

- To assign a role with sole responsibility for the issue, select Leader.

- To assign a role with primary responsibility for the issue, select Primary.

- To assign a role where there will be more than one user with responsibility, select **Secondary**.

5   If you also want to delegate items that are related to the change document(s), select **Delegate related items**.

6   In the **Available users** list, select the user(s) to which you want to delegate the role and click Assign. You can select multiple users.

To replace all the users in the **Assigned users** list with the selected user in the **Available users** list, click Replace.

To remove the role assignment from a user, select the user in the **Assigned users** list, and click Remove.

7   Click Close. The user that has been assigned to the change document receives an e-mail informing them that this change request is in their pending box.

Delegating Ownership of Change Documents

Purpose   Delegate ownership of a change document when it is owned by a Dimensions site and you want to delegate ownership to another Dimensions site for them to be able to update it. When you delegate a change document, the ownership is assigned the next time a replication is run that includes the new site.

For more information about change document replication, see the *Distributed Development Guide*.

Permissions   The change document must be in your Pending list, or you must be a Change Manager.

Replication must be enabled for your site via the Administration Console Network Administration function.

Web client   **To delegate ownership of change documents:**

1 On the Pending or Change Docs tab, select one or more change documents.

2 Click the Replication Options button:

Replication Options

and select Delegate Ownership.

3 Select the site in the **Delegate owning site** list.

4 Click OK

To cancel delegated ownership for change documents:

1 On the Pending or Change Docs tab, select one or more change documents.

2 Click the Replication Options button:

Replication Options

and select Cancel Delegation.

3 Click Yes.

Desktop client   **To delegate ownership of change documents:**

1 In a change document list, select one or more change documents.

2 Select ChangeDoc | Replication Options | Delegate Ownership.

    3   In the **Delegate Owning Site** list, select the site to which you want to delegate ownership of the change document(s) and click OK.

To cancel the delegaton of ownership of change documents:

    1   In a change document list, select one or more change documents.

    2   Select ChangeDoc | Replication Options | Cancel Delegation.

    3   In the Cancel Delegation dialog box, Click OK.

Requesting Ownership of Change Documents

Purpose

Request ownership of a change document when it is owned by another Dimensions site and you want to request ownership of it for your own site in order to be able to update it. When you request a change document, the ownership is assigned the next time a replication is run that includes your site.

For more information about change document replication, see the *Distributed Development Guide*.

Permissions

The change document must be in your Pending list, or you must be a Change Manager.

Replication must be enabled for your site via the Administration Console Network Administration function.

Web client

To request ownership of change documents:

    1   On the Pending or Change Docs tab, select one or more change documents.

    2   Click the Replication Options button:

and select Request Ownership.

3 Click Yes.

To cancel requests for ownership of change documents:

1 On the Pending or Change Docs tab, select one or more change documents.

2 Click the Replication Options button:

and select Cancel Request.

3 Click Yes.

Desktop client   **To request ownership of change documents:**

1 In a change document list, select one or more change documents.

2 Select ChangeDoc | Replication Options | Request Ownership.

3 In the Request Change Document dialog box, click OK.

To cancel requests for ownership of change documents:

1 In a change document list, select one or more change documents.

2 Select ChangeDoc | Replication Options | Cancel Request.

3 In the Cancel Request dialog box, Click OK.

Locking the Ownership of Change Documents

Purpose   Lock the ownership change documents when you want to prevent them from being requested by other Dimensions sites.

Unlock change documents when you want to cancel the ownership lock that has been placed upon them.

For more information about change document replication, see the *Distributed Development Guide*.

Permissions   The change document must be in your Pending list, or you must be a Change Manager.

Web client   **To lock ownership of change documents:**

   1   On the Pending or Change Docs tab, select one or more change documents.

   2   Click the Replication Options button:

   and select Lock Ownership.

   3   Click Yes.

To unlock ownership of change documents:

   1   On the Pending or Change Docs tab, select one or more change documents.

   2   Click the Replication Options button:

   and select Cancel Lock.

   3   Click Yes.

Desktop client   **To lock ownership of change documents:**

   1   In a change document list, select one or more change documents.

   2   Select ChangeDoc | Replication Options | Lock Ownership.

   3   In the Lock Ownership dialog box, click OK.

To unlock ownership of change documents:

1 In a change document list, select one or more change documents.

2 Select ChangeDoc Replication Options | Cancel Lock.

3 In the Cancel Lock dialog box, Click OK.

Managing Custom Lists

Purpose   A custom list, (or User list in the desktop client) is a group of change documents that you can name and save for your own purposes. It consists of any change documents in the catalog that you want to include, and you can add or remove more change documents at any time.

Displaying a Custom List

Purpose   Use this operation to display the change documents in a custom list.

Permissions   No permissions required.

Web client   **To display a custom list:**

1 Select the Queries & Lists tab.

2 At the bottom of the navigation area, select the Lists tab:

3 Select the custom list in the navigation area.

The change documents are displayed in the content area.

Desktop client   **To display a custom list:**

1 At the bottom of the Display bar, click Filtered Views, and click the User tab:

2 Click the icon for the user list.

    The change documents are displayed in a content window.

Creating a Custom List

Purpose   Use this operation to create a new custom list.

Permissions   No permissions required.

Web client   **To create a custom list:**

1 On the Queries & Lists tab, at the bottom of the navigation area, select the Lists tab:

2 Click the New button:

3 Enter an ID for the **Custom list ID**

4 Enter the change document IDs, separated by commas, or use the browse button to select them.

5 Click OK.

To create a custom list by selecting change documents in the Pending, Change Document, or Filtered Views tab:

1 Select the change document(s) in the content area.

2 Click the Custom List button:

> **Append To Custom List:**
> **CPROD_TDR_4 ...**   ✓ OK   ✗ Cancel   ? Help
>
> User name: DMSYS
> **!** **Custom list ID:** [   ] ▾
>
> **⊘** **Change**
>   **document(s):** ["CPROD_TDR_4","CPROD_TDR_3","CPROD_TDR_2] [...]
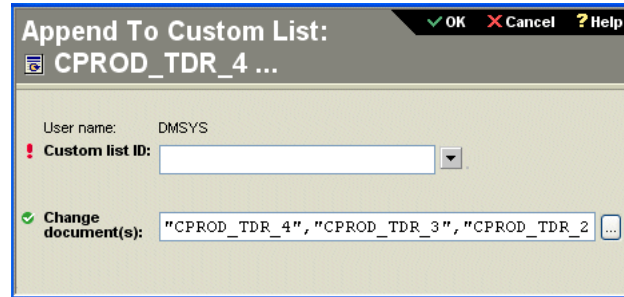
3 Enter the name of the new user list in the **Custom list ID** field.

4 Click OK.

Desktop client   **To create a custom list:**

1 In a change documents list, select one or more change documents.

2 Select ChangeDoc | Edit User List.

> **Edit Change Document User List**
>
> Existing / New User List
> [|] ▾   [OK]
>   [Cancel]
> Save Options   [Help]
> ⦿ Append to   ○ Remove   ○ Overwrite
>   list   from list

3 For **Existing/New User List**, type the name of the new custom list.

4 Click the OK button.

Editing a Custom List

Purpose   Use this operation to add, replace, or remove change documents in a custom list.

Permissions   No permissions required.

Web client   **To append change documents to a custom list from the Lists tab:**

    1 On the Queries & Lists tab with the Lists tab selected, select the custom list in the navigation area.

    2 Click the Append button:

    3 Enter the change document IDs, separated by commas, or use the browse button to select them.

    4 Click OK.

To append to a custom list by selecting change documents in the Pending, Change Document, or Filtered Views tab:

    1 Select the change document(s) in the content area.
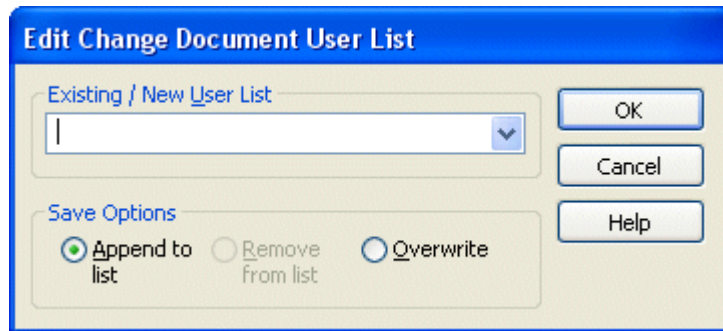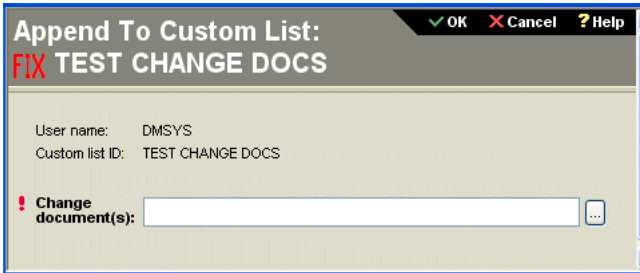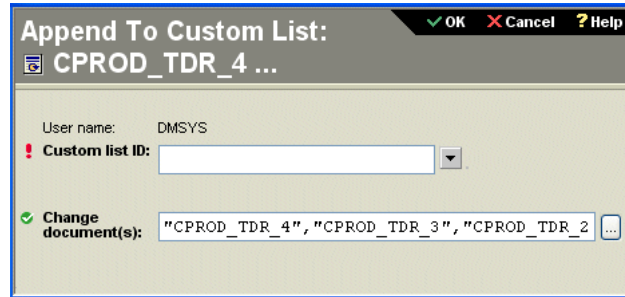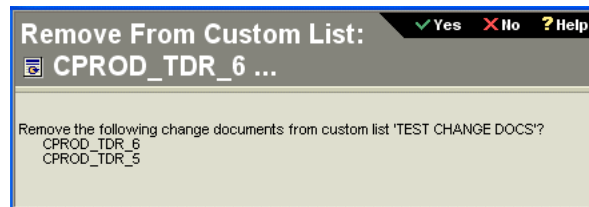
2 Click the Custom List button:

Append To Custom List: CPROD_TDR_4 ...

User name: DMSYS

Custom list ID:

Change document(s): "CPROD_TDR_4","CPROD_TDR_3","CPROD_TDR_2

3 Select the name of the Custom List in the **Custom list ID** field.

4 Click OK.

To remove change documents from a custom list:

1 On the Queries & Lists tab with the Lists tab selected, select the custom list in the navigation area.

2 In the content area, select the change documents you want to remove from the custom list.

3 Click the Remove button:

Remove From Custom List: CPROD_TDR_6 ...

Remove the following change documents from custom list 'TEST CHANGE DOCS'?
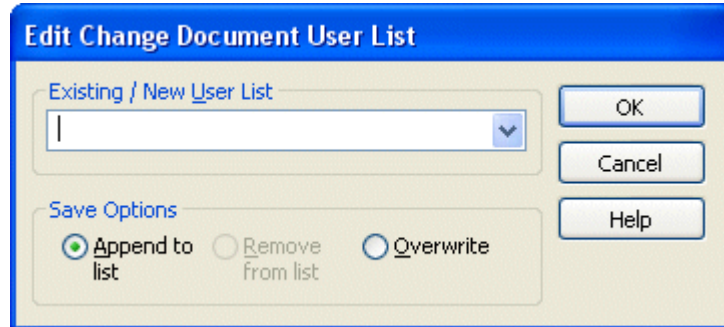CPROD_TDR_6
CPROD_TDR_5

4 In the Remove from Custom List dialog box, click Yes.

Desktop client   **To edit a custom list:**

1 In a change documents list, select one or more change documents.

2 Select ChangeDoc | Edit User List.

3 For **Existing/New Custom List**, select a custom list.

4 Do one of the following:

- To add the selected change documents, select Append to List.

- To remove the selected change documents, select Remove from List.

- To replace all change documents with the new list, select Overwrite.

5 Click the OK button.

Deleting a Custom List

Purpose   Delete a custom list when it is no longer required.

Permissions   You can delete a custom list only if you created it, or you are a Change Manager.

Web client   **To delete a custom list:**

1 On the Queries & Lists tab with the Lists tab selected, select the custom list in the Navigation area.

2 Click the Delete button:

3 In the Delete dialog box, click Yes.

Desktop client **To delete a custom list:**

1 Select ChangeDoc | Delete User List.

2 In the Delete Change Document User List dialog box, select the custom list to delete.

3 Click the OK button.

Viewing Change Document History

Purpose View the history of a change document to see its revision and action history. The revision history shows when a change document was revised and the person who revised it. The action history shows when a change document was actioned and the person who actioned it.

Permissions No permissions required.

Web client **To view the action history of a change document:**

1 On the Pending or Change Docs tab, select a change document and click the Edit button: , or click the change document name.

2 On the Edit Change Document dialog box, click the Action History tab:

3 When you have finished viewing the history, click the Cancel button.

Desktop client **To view the history of a change document:**

1 In a change documents list, select a change document.

2 Select ChangeDoc | History, or click the Change Document History button: 📠
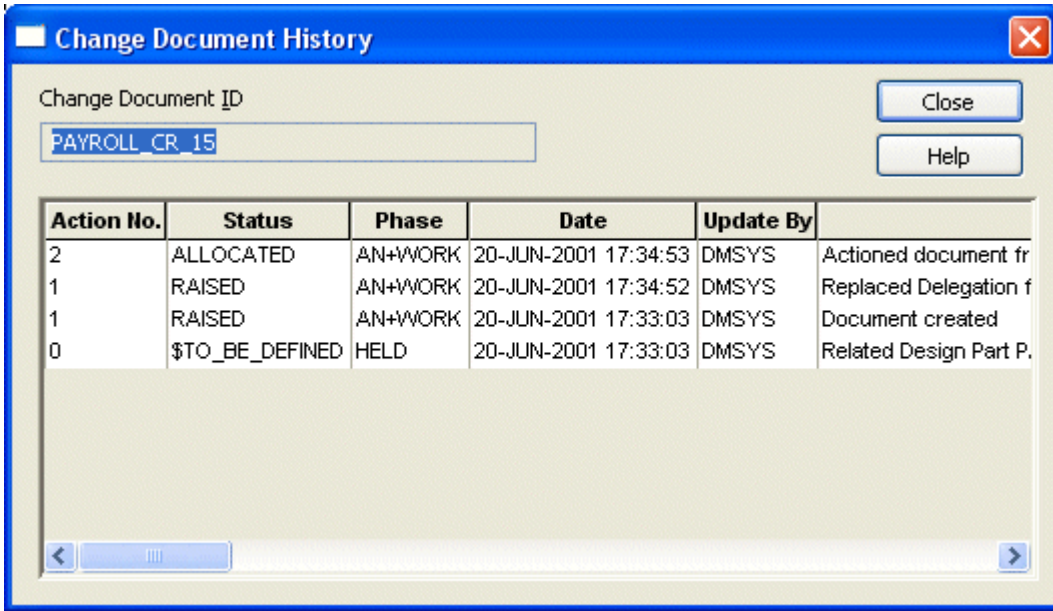
3 When you are finished viewing the history, click the Close button.

Filtering Change Documents

Purpose   Filter change documents to limit the list of change documents in the Pending or Change Docs tabs to the ones you want to view.

Permission   No permissions required.

Web client   **To filter change documents:**

1 In the Pending or Change Docs tab, on the **Filter** list, do one of the following:

■ To show all change documents, select **All Change Documents.**

■ To show only change documents that you updated last, select **Last Updated by Me**.

■ To use a filter you previously defined, select the filter.

To create a filter:

1   On the Pending or Change Docs tab, from the **Filter** list, select New Filter.

2   For **Filter Name**, type a name for the filter.

3   Type or select filtering values in the other fields.

4   To filter based on user-defined attributes, from the **Type** list, select a change document, click the Attributes tab, and type or select values.

5   Click the OK button.

To edit a filter:

1   On the Pending or Change Docs tab, from the **Filter** list, select the filter that you want to edit.

2   From the **Filter** list, select **Edit Current Filter**.

3   To create a new filter based on the current filter, for **Filter Name,** type a new name.

4   Edit, select or type filtering values.

5   To filter based on user-defined attributes, from the **Type** list, select a change document, click the Attributes tab, and type or select values.

6   Click the OK button.
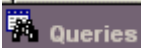
To delete a filter:

1   From the **Filters** list in the Pending or Change Docs tab, select the filter to delete.

2   From the **Filter** list, select **Delete Current Filter**.

Creating Change Document Queries

Purpose   Use this operation to create a change document query.

Permissions   No permissions required.

Web client   **To create a change document query:**

1   On the Queries & Lists tab, in the navigation area, select the Queries tab:

2   Click the New Query button:

3   In the Choose Product and Change Doc dialog box, do the following:

   a   For **Product ID**, select a product.

   b   For **Change Doc Type**, select the type of change document.

    c Click the Next button.

Query Builder   ◀ Back   ✓ Save   ✗ Cancel   ? Help

Products: PAYROLL - Change Docs: CR

Available Fields:

ID
Title
Created by
Status
Last updated by
Phase
Action Date
Creation Date
Update Date
Owning Design Part

Reason for rejection
Reason for deferral
Details of solution given
Platform
ATTR2_PS_ç_ã_?_é
Target Release
Affected Release Id.
ATTR3_PS_Ç_Ä_?_É a??
Site/Location
Operating System
Expected effort in person days
Actual effort expended in person days
Severity/Priority
Company
Estimated Completion Date
Contact name
Customer name
ATTR_PS_1

Query Name:

Query6

Select Fields to Display: Up   Down

>   ID
>>   Title
<   Status
<<   Last updated by

Specify Query Criteria:

Add | Edit | Remove   AND | OR | NOT | (|)

4 In the Query Builder dialog box, for **Query Name**, type a name for the query.

5 Fields that you include in the **Select Fields to Display** list are displayed when you perform the query. To manage the fields in this list, do the following:

  ■ To add a field, select it in the **Available Fields** list, and click the ▸ button.

  ■ To remove a field, select it in the **Select Fields to Display** list, and click the ◂ button.

  ■ To include all available fields in the **Available Fields** list, click the ▸▸ button.

■ To remove all the fields from the **Select Fields to Display** list, click the ⟨⟨ button.

■ To move a field up the **Select Fields to Display** list, select it and click the **Up** button.

■ To move a field down the **Select Fields to Display** list, select it and click the **Down** button.

6 In the **Specify Query Criteria** list, define the criteria on which you want the query to be based by including *where conditions*, connected by logical operators.

■ To add a condition, select a field in the **Available Fields** list and click Add. In the Add Where Condition dialog box, type or select conditions, and click OK. The "where condition" is added to the **Specify Query Criteria** list as a new line. If there is more than one line, it is preceded by an AND operator.

■ To edit a condition, select the line in the **Specify Query Criteria** list and click Edit. In the Add Where Condition dialog box, edit the conditions, and click the OK button.

■ To remove a condition from the **Specify Query Criteria** list, select the line and click the Remove button.

■ To change an AND operator to an OR operator (provided there is more than one line), select the line and click OR.

■ To change an OR operator to an AND operator (provided there is more than one line), select the line and click AND.

■ To include a NOT operator, select the line and click NOT. A NOT operator is added after the AND or OR operator.

- To include a left parenthesis, select the line and click the ⟨ button. A left parenthesis is added after the AND, OR, or NOT operator.

- To include a right parenthesis, select the line and click the ⟩ button. A right parenthesis is added to the end of the line.

- To remove a parenthesis or a NOT operator, select the line and click the corresponding button.

NOTE Query criteria that you enter is optimized by the Dimensions web client. Consequently, the criteria may appear in a slightly different format when you re-open the query. However, query results are not affected.

---

7 Click the Save button: Save. The content area now contains the result of the query.

To edit a change document query, or create a new one based on an existing query:

1 On the Queries & Lists tab with Queries selected, select the query in the content area and click the Modify Query button: or click the query name.

2 To create a new query, in **Query Name** type a new name.

3 Repeat steps 4–6 as described above in **To create a change document query.**

To delete a change document query:

1 In the navigation area of the Filtered Views tab with Queries selected, click the Change Doc queries folder.

2 In the content area, select one or more queries to delete.

3 Click the Delete button: Delete

4 Click Yes.

About Linking Version Management and Change Management

You can combine version management and change management by setting up relationships between change documents and revisions of product items or the baselines containing item revisions. Three relationships are available:

■ **Affected:** Changes described in the change document affect the related revision of the item or baseline.

■ **In Response To:** The item revision or baseline that was created deals with the related change document.

■ **Information:** The item revision or baseline contains information pertaining to the change document, or the change document contains information pertaining to the contents of the item revision.

About Relating Change Documents

You can specify a relationship between one change document and another. You can specify a system-defined relationship or a user-defined relationship.

The system-defined relationship are as follows:

■ **Dependent:** Change documents that are dependent on other change documents for closure.

■ **Info**: Change documents that point to other change documents.

Product Managers define user-defined relationship for use by all users. For additional information on relating objects, see "Relating and Unrelating Objects" on page 108.

6   Managing Design Parts

In this Chapter

About Design Parts

To represent how a project is organized, both from a management and technical perspective, Dimensions models the system as logical structure of elements called *design parts*. Design parts are logical groupings of objects, such as modules of code, specifications, and change documents. Each design part represents a conceptual component of the system. You can have as few or as many design parts as are necessary to represent the project.

Grouping items within a meaningful design part structure makes it easier for people to understand how things fit together and what role they have to play in the success of the project.

For example, the Payroll product can be divided into the following design part structure:

■ Applications

   • Algorithms

   • Bonus

   • Holiday

■ Reports

■ User Documentation
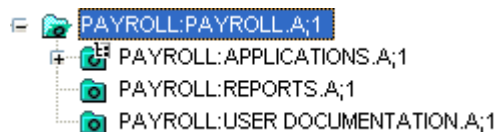
Each of these parts can be divided into smaller parts, as shown for Applications.

The top-level design part of the product is created when the product is defined. For more information on defining products, see the *Process Modeling User's Guide*.

About Design Part Relationships

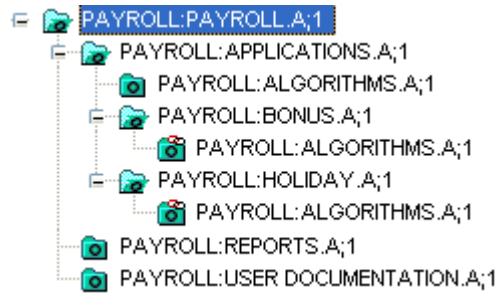Design parts are organized into a product by defining relationships between them. Dimensions has two predefined types of relationship between design parts: breakdown and usage.

■ **Breakdown relationships** describe design parts that have a component relationship. The component design part can be thought of as a child, while the design part that includes it is the parent.

   A child design part inherits the roles and permissions from its parent. This determines the roles users need to perform actions on items owned by the design part at different points in the process.

■ **Usage relationships** express dependencies between design parts, to show where design parts are re-used. To visually indicate that a design part is related by Usage, the design part icon shows a link:

A design part can have the following relationships with other Dimensions objects.

- **Items.** Each design part owns a set of items associated with that part of the product, such as a functional specification document, a test specification, source code files, test data, and a class library.

- **Change documents.** A design part is related to the change documents that affect the design part.

- **Baselines.** A design part is related to the baselines that include the design part.

For more information, see "Relating and Unrelating Objects" on page 108.

About Design Parts and Change Documents

All change documents affect one or more design parts. The scope of work for a change document is determined by the design part that it affects. If the change document affects a design part at the lowest level of the design structure, the scope of the change document is narrowed to that part of the design structure.

Because roles are assigned to users with respect to the design part structure of a product, the design part governs which users have access to the change document.

Ideally, change documents are assigned to the correct design part when they are created. However, this does not always happen because the person submitting the change document may not know which design part the change document affects. Therefore, a few users are normally given roles at the top-level design part that permit them to change the relationship between the change document and the design part.
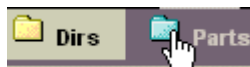
Selecting a Design Part

Purpose   Select a design part so you can perform an operation on it.

Permissions   No permissions required.

Web client   **To select a design part:**

  1 Do one of the following:

   ■ Click the Items tab. If the design part structure is not
      displayed, click the Parts tab at the bottom of the
      navigation area:

   ■ Click the Change Docs tab.

      The design part structure tree displays blue folders:

  2 In the navigation area, select a design part.

Desktop client **To select a design part:**

  1 On the Display Bar, click Version or Change.

  2 Select the Design Part Structure icon:

  3 In the Design Part tree in the content area, select a design
     part.

NOTE In the design part tree, you can only select one design part
at a time. If you want to select multiple design parts, select the
design parts from a design part list shown with the Item Catalog,
Pending Items, Pending Change Documents, and the Change
Documents Catalog. For more information, see "Working in
Object Lists and Trees" on page 94.

Viewing Items Owned By a Design Part

Purpose   View items owned by a design part.

Permissions   No permissions required.

Web client   **To view items owned by a design part:**

      1 Click the Items tab or Change Docs tab.

      2 Select a design part.

Desktop client   **To view items owned by a design part:**

      Select a design part.

      NOTE If the Items window is not displayed, select View | Items.

Showing Users and Roles for a Design Part

Purpose   View the role assignments for a design part.

Permission   No permissions required.

Desktop client   **To show users and roles for a design part:**

      1 Select a design part.

2 Select Part | Show Users/Roles.
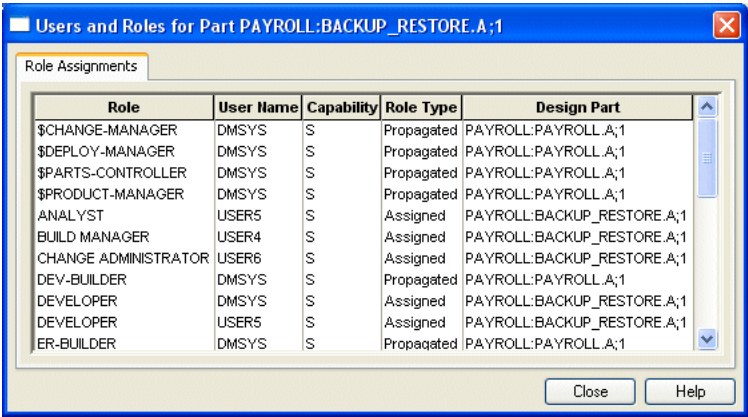
About Creating Design Parts

Use the following guidelines to help you create the design part structure of your product:

■ Have a rough sketch of the tree structure of the product so that you know which part is the parent of each new design part.

■ Have a general idea of the purpose of each new design part, in order to provide a brief description of its function.

■ For each new design part, you need to know its part specification. The part specification is:

productID:*partID*.*variant*;*pcs*

• The *partID* is the name you give the part. It is the most significant component of the specification.

• The *productID* is assigned when the product is created. For more information on creating products, see the *Process Modeling User's Guide*.
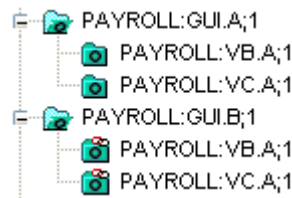
- Use *variant* to identify that this is a variant of another design part. The variant is inherited from the parent design part. Unless directed by the Product Manager to change this value, leave it at its default value. For more information, see "About Variant Design Parts" on page 186.

- The *pcs* (part change status) indicates the modification level of the design part. The PCS is inherited from the parent design part. Unless directed to change this value, leave it at its default value. For more information, see "About Part Change Status (PCS)" on page 190.

■ Know which category to assign each design part. Categories are defined in the process model. Work with the Product Manager to determine which categories to use. For more information on design part categories, see the *Process Modeling User's Guide*.

About Variant Design Parts

Create a variant of a design part when you want the new part to be similar in structure to the source design part, but vary in its definition. For example, if you have an Output Screens design part, you might create a variant for each language: Output Screens Kanji, Output Screens Spanish, and so on.

The advantage of variant design parts is that they enable you to define a logical structure and still support clearly defined variations for different applications, with each variation following the same basic structure. For example, if the source

design part has child design parts in the tree, the new variant design part also has the same child design parts.


```
├─ 📁 PAYROLL:GUI.A;1
│      📷 PAYROLL:VB.A;1
│      📷 PAYROLL:VC.A;1
├─ 📁 PAYROLL:GUI.B;1
│      📷 PAYROLL:VB.A;1
│      📷 PAYROLL:VC.A;1
```

All variants of one design part must be at an equivalent position in the tree structure. A variant design part uses the same part ID as the source design part.

You can perform all the same operations on a variant design part as you can on the source design part.

Creating a Design Part

Purpose   Create a new design part when you want to add a new logical element to the design part structure.

Permissions   You must be the Product Manager or the Part Manager.

Desktop client   **To create a design part:**

    1   Select New | Part.

    2   On the General tab of the New Design Part dialog box, verify that the **Parent Part Specification** is correct, or click Browse and find a different design part.

    3   From the **Category** list, select a category. Categories are created in the Administration Console. For more information, see the *Process Modeling User's Guide*.

> **NOTE**   Do not choose PRODUCT from the **Category** list as it is reserved for the product's top-level design part. Dimensions issues an error message if you try to create a part with this category.

    4   For **New Part ID**, type a name for the design part.

    5   For **Description**, type a brief description of the design part.

    6   Click the Attributes tab, and complete any required fields.

    7   Click Create.

Creating a Variant Design Part

Purpose   Create a variant design part when you want to create a new design part that has the same logical structure as the source design part.

Permissions   You must be the Product Manager or the Part Manager.

Desktop client   **To create a variant design part:**

1   Select a design part.

2   Select Part | New Variant.

3   On the General tab of the New Design Part Variant dialog box, for **New Variant**, type a name for the variant design part. This name differentiates the variant specification from the source specification.

4   For **Description**, type a brief description of the design part.

5   Click the Attributes tab, and complete any required fields.

6   Click Create.

About Part Change Status (PCS)

The part change status (PCS) is an alphanumeric indicator used for version control. It indicates the modification level of the design part. The PCS of a design part is by default inherited from its parent design part. Design part operations can only be performed on the current version of a design part.

When you update the PCS, the original PCS changes to the Closed state and the new PCS is set to the Open status. Closed PCS versions are inaccessible except for certain baseline reports.

The part change status enables you to change the design part structure when you otherwise could not. When you create a release baseline, Dimensions freezes all the items included in the baseline, and the design part structure used for the baseline. Changing the part change status of the relevant design parts, enables you to modify the design part structure after a release baseline has been made from the existing design parts.

Updating the Part Change Status (PCS)

Purpose
Update the part change status of a design part when you want to change the design part structure and you are otherwise restricted from making these changes.

Permissions
You must be the Product Manager or the Part Manager.

Desktop client
To update the PCS of a design part:

    1 Select a design part and select Part | Update PCS.

2 On the General tab of the Update Design Part PCS dialog box, for **New PCS**, type the new value.
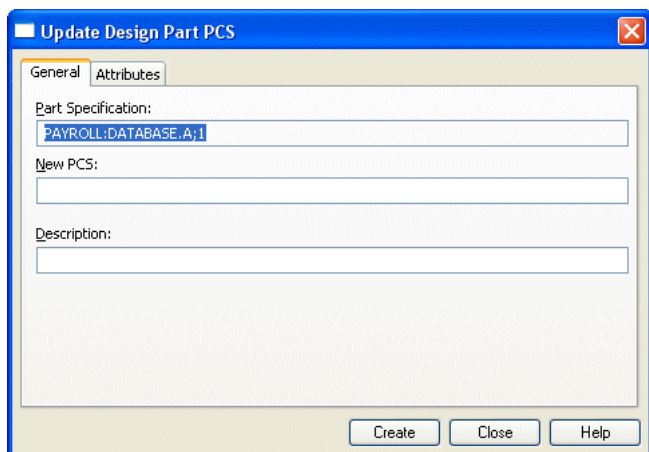
3 Click the Attributes tab, and complete any required fields. The values you enter in the Attributes tab are assigned only to the new PCS. They do not affect these attributes for the previous PCS.

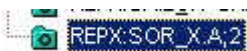4 Click Create. If the change is not visible, select View | Refresh | Current.

Renaming a Design Part

Purpose   Use this procedure to change the name of a design part.

Permissions   You must be the Product Manager or the Part Manager.

Desktop client   **To rename a design part:**

1 In a design part tree, select the design part.

2 Right click on the design part and select **Rename**. An edit box appears:

3 Type the new name.

4 Click on another part of the window. The name is now changed.

Editing Design Part Attributes

Purpose   Use this procedure to change one or more design part attributes.

Permissions   You must be the Product Manager or the Part Manager.

Desktop client   **To edit design part attributes:**

1 Select one or more design parts.

NOTE All the design parts must belong to the same product and be of the same category.

2 Select Part | Edit Attributes.

3   In the Edit Design Part Attributes dialog box, change attribute values as required.

4   Click OK.

Moving Design Parts

Purpose

Move a design part to place it under a different parent in the design part structure. When you move a design part, you also move all the subordinate design parts.

You cannot move a design part in the following situations:

■   If the design part is suspended

■   If the new parent design part is suspended

■   If the design part has any open change documents related to it

■   If the new parent design part belongs to another product.

Permissions

You must be the Product Manager or the Part Manager for the design part you are moving and for the new parent design part.

Desktop client

To move a design part:

1   Select the design part you want to move.

2   Select Part | Move.

3   In the Move Design Part dialog box, for **Parent Design Part**, type a design part specification, or click Browse and find a design part.

4   Click OK.

Suspending Design Parts

Purpose

Suspend design parts when they are no longer needed but you do not want to delete them. For example, you could suspend a design part had been used for a specific purpose and was no longer used. Suspended design parts still appear in Dimensions but you cannot relate change documents to them. Once they are suspended you cannot un-suspend them.

You cannot suspended a design part that is referenced by any open change documents.

Permissions

You must be the Product Manager or the Part Manager.

Desktop client

To suspend a design part:

1 Select one for more design parts.

> **NOTE** All the design parts must belong to the same product and be of the same type.

2 Select Part | Suspend.

3 Verify that you selected the correct design part(s), and click OK. The design parts are visible, but you cannot use them.

Deleting Design Parts

Purpose

Remove a design part when it is no longer useful or you've created it in error. You cannot remove a design part in the following situations:

■ If the design part is related to a change document

■ If the design part has child design parts

■ If the design part owns any items

■ If the design part is in a baseline.

Permissions   You must be the Product Manager or the Part Manager.

Desktop client   **To delete a design part:**

1 Select one or more design parts.

2 Select Part | Delete.

3 In the Delete Design Part dialog box, verify that you selected the correct design parts, and click OK. If the change is not visible, select View | Refresh | Current.

7 Managing Versions

In this Chapter

About Managing Versions

Version management is the process of storing and tracking changes to product components over time. In Dimensions, you manage the versions of product components by working with items and item revisions.

About Items and Item Revisions

An *item* is an object that represents the physical implementation of a product component. For example, an item in a software product could be source code, an executable file, a specification, or a user guide. An item in a web site could be an HTML file, a script, or an image file. An item can also represent data that does not reside on the file system. For example, an item could represent hardware, database objects, paper documents, or inventories.

An *item revision* is a specific version of an item. Whenever you modify an item, a new revision of the item is created and stored in Dimensions. The revision stores the state that the item is in after being modified. The file associated with the item revision is stored in operating system libraries controlled by Dimensions. Every revision is tracked and stored separately so you can make sure revisions are not accidentally lost. Every revision has a full set of attributes that are stored in the Dimensions repository, such as modification date, reason for change, and author's name, so you can trace the history of all changes to an item.

A *directory item* is an entire folder, including subfolders and files, that is compressed and stored in Dimensions as a single item. Directory items are only accessible with the desktop client.

A *virtual*, or *placeholder* item is an item that does not have its associated data file stored in Dimensions. It is used to represent an entity for which versions of the data file do not need to be

maintained in Dimensions. It does however, have revisions, attributes, and relationships.

About Working with Items

Basic version management tasks you can perform with Dimensions are:

■ Create an item

■ Check out item revisions

■ Check in item revisions

■ Get copies of items

■ Action item revisions to a next lifecycle state.

In addition to these, Dimensions provides a number of other features for processing items.

Web client   In the web client, you can do the following version management tasks:

■ **Preview an item:** Preview and print the contents of an item revision.

■ **Copy an item:** Get a copy of an item revision.

■ **View history:** View the action and revision history of an item.

■ **Create an item:** Create a new item by adding a file to Dimensions.

■ **Check out and check in an item:** Check out an item into your working directory to edit it, and check it in when you are finished.

■ **Edit attributes:** Change the attributes of an item.

■ **Action an item:** Move an item revision from one state in the lifecycle to the next state.

■ **Delete an item:** Delete item revisions from the workset or from Dimensions.

■ **Upload items:** Upload files from your working directory into Dimensions to create new items or to update existing items.

Desktop client   In the desktop client, you can do the following version management tasks:

■ **Preview an item**: Preview and print the contents of an item revision.

■ **Get copy of an item:** Get a copy of an item revision.

■ **View history and pedigree**: View the action and revision history of an item, and see how item revisions are related.

■ **Show users and roles**: View the role assignments for an item and the users who have the item on their Pending lists.

■ **Create an item:** Create a new item from an existing file.

■ **Check out and check in an item:** Check out an item into your working directory to edit it, and check it in when you are finished.

■ **Edit or update an item:** Edit an item without checking it out first, or update an item from a file in your working directory.

■ **Edit attributes:** Change the attributes of an item.

■ **Action an item:** Move an item revision from one state in the lifecycle to the next state.

■ **Delete an item:** Delete an item revision from Dimensions.

■ **Remove an item from the workset:** Remove an item revision from the current workset.

■ **Suspend an item:** Suspend an item revision to prevent further work on it.

■ **Change item type:** Change the type of an item.

- **Move an item:** Move an item revision to a different design part.

About Item Specification

Every item is identified by an item specification:

`productID`:`itemID.variant-itemType`;`revision`

- The `productID` is the name of the product that contains the item.

- The `itemID` is a unique identifier for the item. Depending on your process model rules, the item ID might be automatically generated from the item workset filename, or it might be a unique ID typed when the item is created.

- The `variant` is the item variant. A variant is an alternative implementation of an item, usually created to meet different standards or customer requirements.

- The `itemType` is the item type. For example, a source file might have the type SRC. Item types are defined in the process model.

- The `revision` is the revision of the item. The revision might be a number (1 or 1.1) or a mixture of numbers and letters (A1A). If an item is in a named branch, the revision shows the branch name. For example, the revision `winnt#1` indicates that this is revision 1 of an item in the *winnt* branch. The branch name and revision ID are separated by a pound sign (#).

About Revision Branches

A *branch* is a chain of revisions that follows its own separate update path. Branches allow product versions to be developed in parallel. For example, a software product might have separate development branches, one for the next upgrade of the product

and one to rename the product. When work has been completed, the two branches can be merged back into the main development path.
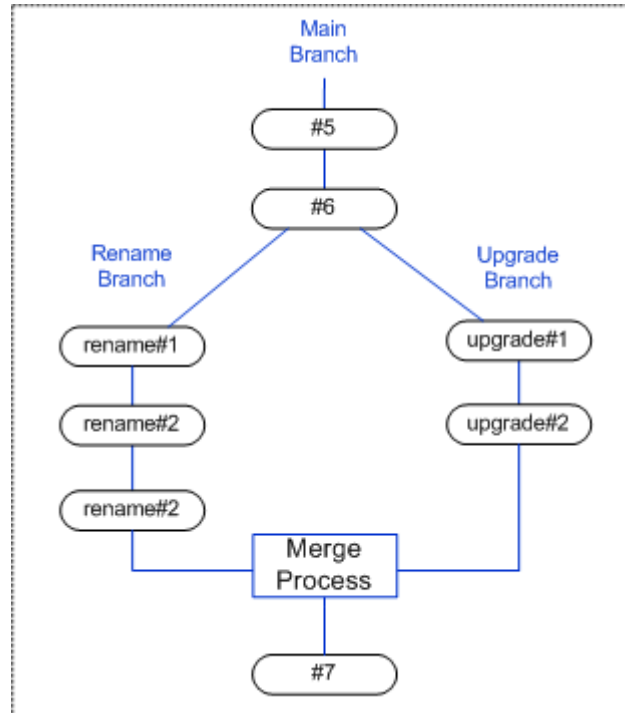
In Dimensions, branches are set up at the workset level. Any revision that is modified in that workset or created in that workset follows the branch rules for the workset.

If an item in a workset has a revision of 1, and the workset is not set up to branch, the revision ID of the item is increased as follows: 2, 3, 4.

If the workset is set up for an unnamed branch and the item type uses the standard level numbering scheme, the revision ID of an item whose revision is initially 1 is increased as follows: 1.1.0, 1.1.1, 1.1.2, 1.1.3.

If the workset is set up for the named branch *upgrade*, the revision ID of the item is increased as follows: *upgrade#1*, *upgrade#2*, *upgrade#3*, *upgrade#4*.

A revision ID might indicate multiple branches. For example, in a workset set up for an unnamed branch, an item with the revision ID *upgrade#1* would be increased as follows: *upgrade#1.1.0*, *upgrade#1.1.1*, *upgrade#1.1.2*.

About Item Relationships

Items are related to other Dimensions objects, such as change documents, baselines, and releases. Item relationships enable you to trace the creation and release of various components in a product.

An item revision can participate in the following types of relationships:

■   Items are owned by a single design part and can be used by other design parts. Item-design part relationships apply to all revisions of an item.

■   Item revisions are related to the worksets, baselines, and releases that include them.

■   Item revisions are related to the items used to build them or the items built from them. For example, a source file is related to the object file built from it, and an executable file is related to its object files.

■   Item revisions are related to the earlier revisions that were merged or altered to create them.

■   Item revisions are related to the change documents that affect them, such as bug reports and change requests.

■   An item revision can participate in user-defined relationships, which are defined in the process model. For example, a design

specification document can be related to a source file, or a chapter can be related to a book.

You can view item relationships and, for some relationships, change or unrelate them.

For more information about relating items to other Dimensions objects, see "Relating and Unrelating Objects" on page 76 (web client) or "Relating and Unrelating Objects" on page 108 (desktop client).

Selecting Items

Purpose

Select items when you want to perform operations on them, such as checking them in or out, or when you want to view item properties or attributes. By default, an Items list shows only the latest item revisions for your current workset.

You can select any revision of an item to preview it, get a copy of it, or check it out. If you check out a revision to edit it, the next revision is allocated according to your process model rules.

Web client

To select an item:

1 Do one of the following:

■ **To select from your Pending list**, click the Pending tab, and then click the Items icon:

■ **To select from items in a workset directory**, click the Items Tab, and then click a workset folder:

■ **To select from items in a design part**, click the Items tab, select the Parts tab in the navigation area:
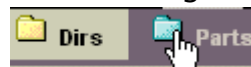
and then click a design part folder:

- **To select from all items in the product**, if the design part tree isn't showing, click the Items tab, select the Parts tab in the navigation area:

- and then click the Catalog icon:

2 In the content area, do one of the following:

- **To select an item**, click the check box next to it: ☑

- **To select all items in the list**, click the select all icon in the column heading:

To select an earlier revision of an item:

1 On the Pending tab or Items tab, from the **Filter** list, select **All Revisions**.

2 In the content area, select the revision you want.

Desktop client   **To select an item:**

1 In the Display Bar, click Version.

2 Do one of the following:

- **To select from your Pending list**, click the Pending Items icon:

- **To select from items in a workset directory**, click the Workset Structure icon:

■ **To select from items in a design part**, click the Design Part Structure icon:

Design Part Structur

■ **To select from all items in the product**, click the Item Catalog icon:

Item Catalog

3 In an Items list, do one of the following:

■ **To select a single item,** click the select button: next to the item or click anywhere in the row containing the item.

■ **To select multiple items**, Ctrl+click each item.

■ **To select a range of items,** click the first item in the range, then SHIFT+click the last item.

■ **To select all items in the list,** click the blank column heading:

To select an earlier revision of an item:

1 In an Items list, click the revision ID.

2 Click the arrow to the right of the revision ID, and then select the revision you want.

Previewing and Printing an Item

Purpose

Preview an item revision when you want a fast way to look at the contents of an item revision without first checking it out or getting a local copy of it.

The item revision opens in the editor assigned to that item's format.

In the web client the editor is determined by the MIME type associated with the item format. This association is specified in the Administration Console. In the desktop client this assignment is determined by your Windows association for the file's extension, unless an editor has been associated with the item format in the Editors tab of the Preferences dialog box. For more information about assigning an editor, see "Assigning Editors" on page 450.

While you have an item revision open in your editor, you can print it.

NOTE You cannot preview a directory item.

NOTE When you preview a virtual, or placeholder, item, you will just see the item header with the appropriate variables substituted.

Permissions

You must have a role on the design part that owns the item or on a design part above it.

Web client

To preview and print an item:

1 On the Pending tab or Items tab, click the name of the item.

2 In the Edit Item Properties dialog box, click the Preview tab.

> You see the contents of the item revision in the editor assigned to the item format.
>
> **3** To print the item, use the editor's print command.
>
> **4** To return to the Edit Item Properties dialog box, exit the editor.

Desktop client   **To preview and print an item:**

> **1** In an Items list, select the item.
>
> **2** Select Item | Browse.
>
> You see the contents of the item revision in the editor assigned to the item format.
>
> **3** To print the item, use the editor's print command.
>
> **4** To return to Dimensions, exit the editor.

Getting a Copy of an Item

Purpose   Get a copy of an item revision so you can view it without checking it out. When you get a copy of an item revision, Dimensions leaves the revision in its current state (checked in or checked out) and creates a read-only copy in your working directory.

You can also add an entire directory in the form of a directory item. When you get a copy of a directory item, the subdirectories and items contained within it are expanded and copied to their relative locations in your workset root directory.
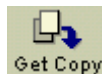
Permissions   You must have a role on the design part that owns the item or on a design part above it.

Web client   **To get a copy of an item:**

> **1** On the Pending tab or Items tab, select one or more items.

2 Click the Get Copy button:

3 For **Place Copy in Directory**, enter the full path and filename.

4 Click the OK button.

Desktop client **To get a copy of an item:**

1 In an Items list, select one or more items.

2 Select Item | Get, or click the Get Item button:

3 For **Name of File to Contain Item**, do one of the following:

- Enter the full path and filename.

- Click Browse: and navigate to the folder containing the file. If you are creating a new file, enter a filename.

4 Click the OK button.

Viewing Item History

Purpose View the history of an item to see its revision and action history. The revision history shows when an item was revised and the person who created the revision. The action history shows when an item was actioned and the person who actioned it.

In the desktop client, you can view an item's pedigree to see how successive revisions of an item are related in time and origin. The pedigree shows all events, including branches, merges, and inclusion in baselines and releases.

Permissions No permissions required.

Web client **To view the action history of an item:**

1 On the Pending tab or Items tab, click the name of the item.

2 In the Open Item dialog box, click the Action History tab.

To view the revision history of an item:

1   On the Pending tab or the Items tab, select the item.

2   Click the History button:

3   When you are finished, click the Close button.

Desktop client   **To view the history of an item:**

1   In an Items list, select the item.

2   Select Item | History, or click the Item History button:

3   When you are finished viewing history, click the Close button.

To view the pedigree of an item:

1   In an Items list, select the item.

2   Select Item | Pedigree, or click the Display Pedigree button:

   You see the item in the Pedigree window. For more information, see "Working in the Pedigree Window" on page 116.

3   To close the Pedigree window, click its Close button:

Showing Users and Roles for an Item

Purpose   You can view the current role assignments for an item and view the users who currently have that item on their Pending lists.

Permissions   No permissions required.

Desktop client   **To show the users and roles for an item:**

1   In an Items list, select the item.

   2   Select Item | Show Users and Roles.

   3   To see which users have this item in their Pending lists, click the Users it is Pending For tab.

   4   To see which users are assigned to a particular role for this item, click the Role Assignments tab.

   5   When you are finished, click the Close button.

About Creating New Items

You create a new item by adding a file to Dimensions. When you create an item, you identify the file to add, specify the item type, and fill in other attributes that help identify the item.

You can also create a new item that is not based on a file. For example, you might create an item to represent hardware that cannot be physically represented in Dimensions. Or you might create a placeholder item for content that is still to be written. If your process model defines an item format template for the item type you are creating, it determines the initial content of the item when you preview it or get a copy of it.

An *item format template* is a text file that defines the initial content of an item that is created without content. Item format templates can include substitution variables, which are expanded dynamically when an item is copied or previewed. For more information, see .

About Setting the Item Type

When you create a new item, you must specify an item type, such as an object file, source file, or documentation. Based on the item

type and rules in your process model, Dimensions automatically specifies certain attributes for the newly-created item. When you create a new item by adding a file, Dimensions automatically selects an item type based on the file extension. You can change the item type.

If you are creating an item without adding a file, you must select an item type.

About Setting the Item File Format

Your process model may specify multiple file formats for a given item type. This enables Dimensions to handle different kinds of items differently even though they share the same item type.

For example, in a software product you could distinguish files on the basis of language (for program sources) or execution platform (for executable program files) to use different build processes for items of the same type but different formats. Thus, an item of type SRC and format C would be compiled using a C compiler, and an item of type SRC and format CBL would be compiled using a COBOL compiler.

If an item type has a list of associated file formats, you must select one of those formats when you create an item of that type. If an item type has no associated file formats, you can type in any format, even ones not defined in the process model.

About Setting the Item ID and Workset Filename

When you create an item by adding a file to a workset, Dimensions uses the workset directory structure and the name of the file to create a workset filename. The workset filename determines the name of the item file when it is accessed from or to your work area. For example, if you add a file named *cabin.c* to

a workset directory named *src*, the new item workset filename is *src\cabin.c*. You can change the default workset filename.

In the desktop client, if you create an item without adding a file, you must type a workset filename for the new item.

If your process model has been set up to automatically generate a unique item ID, this will be based on the workset filename and extension. For example, if you add a file named *cabin.c* the item ID will be set to *CABIN C*. Dimensions may add an integer to the item ID to make sure it is unique within the product. If the process model has not been set up to automatically generate the item ID, you must enter one, and make sure it is unique within the product.

About Using Header Substitution Variables

You can include configuration management information in the form of a file header for certain types of items. For example, in a C program, the file could include a header section giving details about the file such as its filename, revision, lifecycle status, and item ID.

In Dimensions, you can add a header that contains substitution variables that refer to attributes of an item revision. The variables are expanded dynamically when you get a copy of, preview, or build the item.

For example, you could show the specification of an item in the item file. The following header:

```
%PCMS_HEADER_SUBSTITUTION_START%
Name:
                 %PID%
%PCMS_HEADER_SUBSTITUTION_END%
```

Would produce this text:

```
Name:
                        PAYROLL:BONUS C.A-SRC;1
```

You can embed multiple headers anywhere in a file.

For more information, see the *Process Modeling User's Guide*.

Creating a New Item

Purpose
Create a new item by adding an existing file to Dimensions.

In the web client, you can also create new items by uploading files. For more information, see "Uploading Files" on page 242.

You can also add an existing directory as a directory item. The contents of a directory, including its subdirectories and files, are compressed and stored in Dimensions.

Your process model may require you to relate a new item to a change document.

Permissions
You must have a role that enables you to action an item from its initial lifecycle state to a new state. If the Product Manager has assigned the $ORIGINATOR role to the first transition in the lifecycle for this item type, any Dimensions user that has a role on the design part that owns the new item can create an item.

The Product Manager can create items without a role on the initial lifecycle transition.

Web client
To create a new item from a file or directory:

1   On the Items tab, select the workset directory to which you want to add an item.

2   Click the Add Item button:

3   Choose between **item file, directory item,** or **virtual item.**

If you choose **directory item**, the directory and all its files and subdirectories will be stored in Dimensions as a single item.

If you choose **virtual item**, the item will not have a data file associated with it.

4   In the **Location to add** field, If you have chosen **item file** or **directory item**, type the pathname of the file or directory you want to add, or click the browse button: ⬚ to find it.

5   For **Owning Design Part**, type the name of the design part, or click the browse button: ⬚ to find it.

6   If required, in the **Related Change Documents** field, type the name of the related change document, or click the browse button: ⬚ to find it.

7   To select an item type other than the default, which is based on the file extension, click the **Advanced Options** link, and select an item type.

8   If you have chosen **virtual item** above, enter a **Workset Filename**. (Click the **Advanced Options** link if you cannot see this field.)

9   To set attributes, click the Attributes tab, and type or select values.

Required attributes are marked with a red exclamation point: ❗

10   Click the OK button.

After creation, the item appears in your Pending list. It will not appear in any other user's Pending list until it has been actioned to them.

Desktop client   **To create a new item from a file or directory:**

1   Do one of the following:

■ In a Design Part tree, select a design part.

- In a Workset tree, select a workset.

2   Select **File | New | Item,** or click the New Item button: ⬒

3   In the **Item/directory to Add** field, type the pathname of the file or directory you want to add, or click the browse arrow ▶ to find it.

4   For **Owning Design Part**, type the name of the design part, or click the browse button: … and use the Find dialog box.

5   For **Item Type**, accept or select an item type.

6   If required, in the **Related Change Document(s)** field, type the name of the related change document, or click the browse button: … and use the Find dialog box.

7   To set attributes, click the Attributes tab, and type or select values.

Attributes in bold are required. Attributes in italics cannot be modified.

8   Click the Create button.

After creation, the item appears in your Pending list. It will not appear in any other user's Pending list until it has been actioned to them.

To create an item without adding a file:

1   Do one of the following:

- In a Design Part tree, select a design part.

- In a Workset tree, select a workset.

2   Select **File | New | Item,** or click the New Item button: ⬒

3   For **Owning Design Part**, type the name of the design part, or click the browse button: … and use the Find dialog box.

4   For **Item Type**, select an item type.

5   For **Item**, select or enter a format.

6   If required, in **Related Change Document**, type the name of the related change document, or click the browse button: ⬚ and use the Find dialog box.

7   Click the Advanced tab.

8   In the **Filename** field, type a workset filename for the new item, including a file extension.

9   To set attributes, click the Attributes tab, and type or select values.

    Attributes in bold are required. Attributes in italics cannot be modified.

10   Click the Create button.

About Editing Items

When you edit an item, Dimensions creates a new revision of the item and updates the revision ID according to your process model rules. For example, in the following figure, the process model

rules determine that Revision 2 is automatically increased to Revision 3.

Dimensions repository
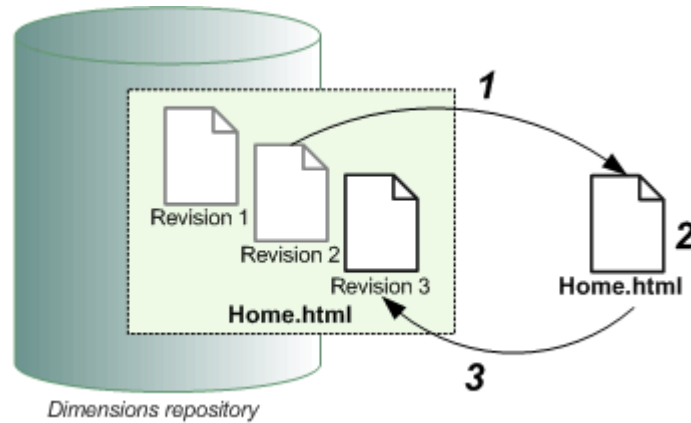
When you check out an item, the new revision is reserved in Dimensions. After you modify the revision in your working directory, you check it in.

In the desktop client, you can use the Edit command to edit an item without checking it out first. When you use the Edit command, the item is automatically checked out and a new revision is reserved in Dimensions. The revision is checked back into Dimensions when you exit the editor. For more information, see "Editing an Item" on page 225.

You can also modify an item by updating it from a file in your working directory, without first checking out the item. Dimensions creates a new revision of the item from the contents of the file, and the item revision ID is updated according to your process model rules. In the desktop client, you use the Update command. For more information, see "Renaming an Item" on page 227. In the web client, you can use the Upload command to do this. For more information, see "Uploading Files" on page 242.

About Changing the Revision ID

Your process model determines how new revisions of an item are numbered. Generally, when you check out, edit, or update an item, the revision ID is automatically incremented. Your process model may allow you to choose a different revision ID. For example, if the next revision of Home.html would be revision 3, you might be able to change it to revision 4.

If your current workset is set up to use named branches, the branch name is included in the revision ID. For example, a new revision in the Windows NT branch would be given the revision *winnt#1*, where *winnt* is the branch name and *1* is the revision ID. For more information about branches, see "About Revision Branches" on page 202.

Your process model may allow you to check out, edit, or update an item without changing the revision ID. Generally, this is allowed only when an item is in its initial lifecycle state and has not yet been actioned or included in a baseline. For example, you might modify an item without changing the revision when you are working on an item during multiple editing sessions.

NOTE Editing an item revision without changing the revision ID changes the content of that revision in all worksets that include the revision.

About Overriding the Workset Filename

When you check out or get a copy of an item revision, it is placed in the workset root directory in your working area. By default, an item revision is placed in a location relative to its path in the workset, and the newly-created file is given the item workset filename.

For example, on a Windows computer, if your root directory is *c:\payroll* and the item workset filename is *src\cabin.c*, the item is copied into a file named *c:\payroll\src\cabin.c*.

Similarly, on a UNIX computer, if your root directory is */usr/home/ payroll*, the item *src/cabin.c* is copied into a file named */usr/home/ payroll/src/cabin.c*.
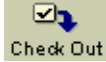
When you check out or get a copy of an item revision, you can override either both the directory into which the item is placed and the item filename. For example, if you were examining an earlier revision of an item, you might want to place the copy in a different location than the latest revision.

If the default location of an item would be *c:\payroll\src\cabin.c*, you could place the item in *c:\temp\src\cabin.c* (to change the directory) or in *c:\payroll\src\cabincopy.c* (to change the filename).

Checking Out an Item

Purpose   Check out an item revision when you want to edit it. The item revision is copied into your working directory and locked in Dimensions so no one else can modify it.

In the desktop client, when you check out a directory item, its directories and file contents are uncompressed and reconstructed in your work area.

Your process model may require you to relate an item to a change document when you check it out.

Permissions   You must have a role that enables you to action an item from its initial lifecycle state to a new state.

Web client   **To check out an item:**

1   On the Items tab or the Pending tab, select one or more items.

You can select multiple items. If you do, you cannot change item attributes or edit certain other item properties, such as the branch and revision.

2 Click the Check Out button:

3 For **Revision**, accept or type a revision ID

4 For **Branch**, accept or select a branch.

5 If required, in the **Relate to change documents** field, type the name of the related change document, or click the browse button: to find it.

6 Click the OK button.

In the content area, the icon for the checked out item revision shows a check mark: , and the **Status** column changes to a status of $TO_BE_DEFINED.

Desktop client   **To check out an item:**

1 In an Items list, select one or more items.

You can select multiple items. If you do, you cannot change item attributes or edit certain other item properties, such as the branch and revision.

2 Select Item | Check Out, or click the Check Out button:

3 For **New Named Branch**, accept or select a branch.

4 For **New Revision**, accept or type a revision ID.

5 If required, for change document, type the name of the related change document, or click the browse button: and use the Find dialog box.

6 Click the OK button.

In the content window, the icon for the checked out item revision shows a special symbol: , and the **Status** column changes to $TO_BE_DEFINED.
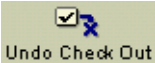
Checking In an Item

Purpose   Check in an item revision when you have finished editing it and want to update Dimensions.

Permissions   You must be either the same person who initially checked out the item revision, or the Product Manager.

Web client   **To check in an item:**

1   On the Pending tab or Items tab, select one or more checked out item revisions.

You can select multiple items. If you do, you cannot change item attributes.

2   Click the Check In button:

3   In the **Description** field, type a description of the changes you made.

4   To set attributes, click the Attributes tab and type or select values.

Required attributes are marked with a red exclamation point:

5   Click the OK button.

Desktop client   **To check in an item:**

1   In an Items list, select one or more checked out item revisions.

You can select multiple items. If you do, you cannot change item attributes or status.

2 Select Item | Check In, or click the Check In Item button: ⬆

3 In the **Comment** field, type a description of the changes you made.

4 To set attributes, click the Attributes tab and type or select values.

   Attributes in bold are required. Attributes in italics cannot be modified.

5 Click the OK button.

Undoing an Item Checkout

Purpose   Undo a checkout when you have an item revision checked out and you want to discard your changes. When you undo a checkout, the item remains unchanged in Dimensions.

Permissions   You must be either the same person who initially checked out the item revision, or the Product Manager.

Web client   **To undo an item checkout:**

1 On the Pending tab or Items tab, select one or more checked out item revisions.

2 Click the Undo Check Out button: ☑✗ Undo Check Out

3 Click the OK button.

Desktop client **To undo an item checkout:**

1 In an Items list, select one or more checked out item revisions.

2 Select Item | Undo Check Out, or click the Undo Check Out button: ⬆

3 Click the OK button.

Editing an Item

Purpose

In the desktop client, you can edit an item without first checking it out. When you use the Edit command, the revision is automatically checked out, opened in the editor associated with that item format, and then checked in when you exit the editor.

Use the Edit command when you want to make a quick change to a revision. If you need to edit a revision over an extended period of time, check it out first.

Your process model may require you to associate an edited item with a change document.

NOTE You cannot edit a directory item.

Permissions

To edit an item, you must have a role that enables you to action the item from the initial lifecycle state to a new state.

Desktop client

To edit an item:

1   In an Items list, select the item.

2   Select Item | Edit.

   The item is automatically checked out while you are editing it.

3   For **New Named Branch**, accept or select a named branch.

4   For **New Version**, accept or type a new revision ID.

5   If required, in the **Change Document ID** field, type the name of a related change document, or click the browse button: and use the Find dialog box.

6   In the **Reason** field, type a description of the changes you are making.

7   Click the OK button.

The item revision opens in the editor associated with that item format.

8 When you are finished making changes, save the file and exit the editor.

The revision is automatically checked in and the revision ID is changed according to your process model rules.

Editing Item Attributes

Purpose   Edit item attributes to set or change attribute values. You can edit item attributes without first checking out the item.

Permissions   The attribute update rules defined in the process model determine which attributes you can edit.

NOTE When you edit an item attribute that is sensitive, thus requiring an electronic signature, you will be presented with an Authentication Point dialog box. In this case, enter your Dimensions password and click OK.

Web client   **To edit item attributes:**

1 On the Pending tab or Items tab, click the name of the item, or click the More button: ▶ , and select Open.

2 In the Open Item dialog box, click the Attributes tab, and type or select values.

Required attributes are marked with a red exclamation point: ❗

3 Click the Save button.

Desktop client **To edit item attributes:**

1 In an Items list, select one or more items.

You can select multiple items if they belong to the same product and have the same item type.

2   Select Item | Edit Attributes.

3   On the Attributes tab, type or select values.

Attributes in bold are required. Attributes in italics cannot be modified.

4   Click the OK button.

Renaming an Item

Purpose

Rename an item when you want to change the item ID.

You must have a role that enables you to action the item from the initial lifecycle state to a new state.

Web client

To rename an item:

1   On the Pending tab or Items tab, click the name of the item.

2   In the Open Item dialog box, on the General tab, enter the new item ID in the Item ID field.

3   Click the Save button.

Desktop client

To rename an item:

1   In an Items list, select the item.

2   Select Item | Rename.

3   For **New Item ID**, type the new item identifier.

4   Click the OK button.

Updating an Item

Purpose
Update an item when you want to create a new revision using the contents of a file in your working directory. Updating an item is similar to using the Edit command in that you do not need to check out the item first. When you update an item, the revision ID is changed according to your process model rules.

Your process model may require you to relate a change document to the updated item.

Permissions
You must have a role that enables you to action the item from the initial lifecycle state to a new state.

Desktop client
To update an item:

1   In an Items list, select one or more items.

You can select multiple items. If you do, you cannot change item attributes or edit certain other item properties, such as the branch and revision.

2   Select Item | Update.

3   For **Name of File to Update Item From**, type the pathname of the file or directory you want to use as the source, or click the browse button: ... to find it.

4   If required, in the **Change Document ID** field, type the name of a related change document, or click the browse button: ... use the FInd dialog box.

5   If required, type the reason for the item update.

6   Click the OK button.

Actioning an Item

Purpose

Action an item revision when you want to move it from its current state to one of the next available lifecycle states. You action an item revision when the work for the current lifecycle state is complete. An item revision must be checked in before you can action it.

When you action an item from your Pending list, it is removed from your list and moved to the Pending lists of users who have roles for the next lifecycle state.

Permissions

The item revision must be in your pending list, or you must be the Product Manager.

NOTE When you action an item to or from a lifecycle state that is sensitive, thus requiring an electronic signature, you will be presented with an Authentication Point dialog box. In this case, enter your Dimensions password and click OK.

Web client

To action an item:

1   From the Pending tab or Items tab, select one or more items. If you select multiple items, you cannot change item attributes.

2   Click the Action button:

3   For **Action to**, select a lifecycle state:

   ■ **If you are actioning a single item**, select the lifecycle state.

   ■ **If you are actioning multiple items**, either select **Next normal state** or select **Named state** and type a lifecycle state. You must type a common lifecycle state for all items.

4   Optionally, in the **Reason for action** field, type a comment.

5   If you want to initiate a build for the item(s), check the **Start build after action** check box.

NOTE Only items that are associated with a target definition file have this build option. For further details on building items, see "About ChangeMan Builder" on page 418.

---

6   To set attributes, click the Attributes tab, and type or select values.

Required attributes are marked with a red exclamation point:

7   Click the OK button.

8   If you selected **Start build after action,** you will be presented with the Build Item dialog box. Complete the dialog box as described in "Building an Item" on page 422.

If there are errors or warnings from the Action, you can view these by clicking the Details button, and then proceed to the Build Item dialog box by clicking the Continue button.

Desktop client   **To action an item:**

1   In an Items list, select one or more items. If you select multiple items, you cannot change item attributes.

2   Select Item | Action, or click the Action Item button:

3   From the **New Status** list, select a lifecycle state or leave it blank to action the item to the next normal lifecycle state.

If you are a Product Manager and want to action the item to any lifecycle state, click the **All Statuses** option, and then select a lifecycle state.

4   Optionally, in the **Action Description** field, type a comment.

5   If you want to initiate a build for the item(s), check the **Start build after action** check box.

Serena® ChangeMan® Dimensions™

> **NOTE** Only items that are associated with a target definition
> file have this build option. For further details on building
> items, see "About ChangeMan Builder" on page 418.

6 To set attributes, click the Attributes tab, and type or select
values.

Attributes in bold are required. Attributes in italics cannot be
modified.

7 Click the OK button.

8 If you selected **Start build after action,** you will be presented
with the Build Item dialog box. Complete the dialog box as
described in "Building an Item" on page 422.

If there are errors or warnings from the Action, you can view
these in the message or Console Window, and then proceed to
the Build Item dialog box.

Delegating an Item

Purpose   Delegate an item when you want to assign an item to a user who
does not currently have a role for the item. If an item is on your
Pending list, you can delegate it to enable another user to action
the item in your place. If you are a Product Manager, you can
delegate an item to override the design part role assignments. For
example, you could delegate an item to a backup person.

For more information about roles and role responsibilities, see
"About Roles and Permissions" on page 37.

Permissions   The item must be in your Pending list, or you must be the Product
Manager. In addition, your process model must define a list of
candidate users.

Web client   **To delegate an item:**

1   On the Pending tab or Items tab, select one or more items.

2   Click the Delegate button:

3   Use the Delegate wizard to assign a role to a candidate user.

For help with the Delegate wizard, click the Help button in the wizard.

Desktop client   **To delegate an item:**

1   In an Items list, select one or more items.

You can select multiple items if they belong to the same product and have the same item type.

2   Select Item | Delegate, or click the Delegate Item button:
Select the Roles tab if this is not displayed
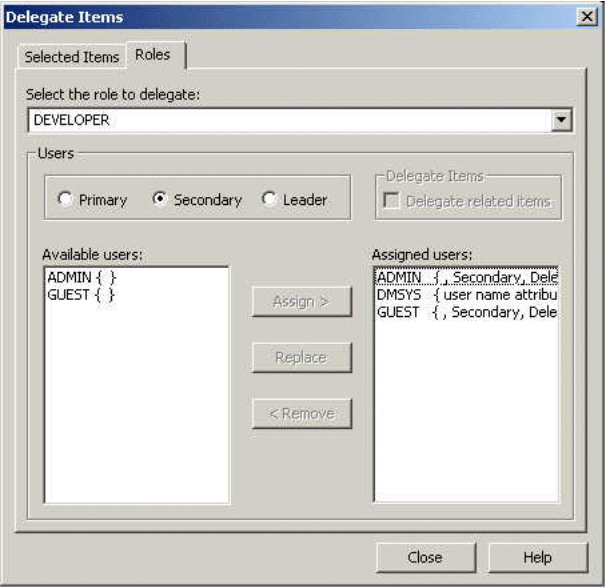
3   From the **Select the role to delegate** list, select the role that you want to delegate.

4   Select the level of responsibility for the role:

- ■ **To assign a role with sole responsibility**, select **Leader**.

- ■ **To assign a role with primary responsibility for an item**, select **Primary**.

- ■ **To assign a role where there will be more than one user with responsibility**, select **Secondary**.

5   In the **Available users** list, select the user(s) to which you want to delegate the role and click Assign. You can select multiple users.

To replace all the users in the **Assigned users** list with the selected user in the **Available users** list, click Replace.

To remove the role assignment from a user, select the user in the **Assigned users** list, and click Remove.

6   Click the Close button.

The user receives an e-mail informing them that the item is on their Pending list.

Deleting an Item Revision

Purpose   Delete an item revision to remove it from the Dimensions repository. Note that the associated file in the item library will need to be manually deleted outside Dimensions. If you delete an item with only one revision, you delete the item itself from Dimensions.

You cannot delete a revision that is being used by other objects. For example, you cannot delete a revision that has been included in a release or archive baseline. To prevent an item revision from being used in the product without deleting it, suspend it. For more information, see "Suspending an Item" on page 234.

An item revision can also be deleted from a workset. For more information, see "Removing an Item Revision from a Workset" on page 280.

Permissions   The item must be at the initial lifecycle state and must be in your Pending list, or you must be the Product Manager.

Web client   **To delete an item revision:**

1   On the Pending tab or Items tab, select one or more item revisions.

2   Click the More button: ▶ , and select Delete.

3   In the Delete dialog box, verify that you have selected the correct item revisions.

4   For **Delete Revision from**, select **Repository,** and click the OK button.

Desktop client   **To delete an item revision:**

1   In an Items list, select one or more item revisions.

2   Select Item | Delete.

3   In the Delete Item or Delete Multiple Items dialog box, verify that you have selected the correct revision(s), and click the OK button.

Suspending an Item

Purpose   Suspend an item revision when you want to prevent it from being used in further work on a product. You cannot modify a suspended revision or include it in a baseline or release, but you can create new revisions from it.

NOTE Suspended items will be included when you create a revised baseline if they are referenced by change documents used to revise the baseline.

NOTE If you subsequently want to unsuspend the item revision, you will need to action it from SUSPENDED to another lifecycle state. You will need to be the Product Manager to do this. For details, see "Actioning an Item" on page 229.

Permissions

The item revision must be in your Pending list, or you must be the Product Manager.

Web client

To suspend items:

1   On the Pending tab or Items tab, select one or more item revisions.

2   Click the More button: ▶ , and select Suspend.

3   In the Suspend dialog box, verify that you have selected the correct item revision(s), and click the Yes button.

The **Status** column in the Items list changes to SUSPENDED.

Desktop client

To suspend an item:

1   In an Items list, select the item.

2   Select Item | Suspend.

3   In the Suspend Item dialog box, verify that you have selected the correct item revisions, and click the OK button.

The **Status** column in the Items list changes to SUSPENDED.

Changing Item Type

Purpose

Change the type of an item if you have created it with the wrong type, or if you wish to recategorize it as a different item type.

Item types are defined in the process model.

Permissions

You must be the Product Manager.

Web client

To change item type:

1 On the Pending tab or Items tab, click the name of the item.

2 In the Open Item dialog box, on the General tab, select the new item type in the **Item type list**.

3 Click the Save button.

Desktop client

To change item type:

1 In an Items list, select one or more items.

2 Select Item | Change Type.

3 From **New Type**, type or select an item type.

4 Click the OK button.

Moving an Item to a Different Design Part

Purpose

Move an item and all of its revisions to a different design part when you want the item to be owned by a different design part. For example, you might move an item if it was inadvertently created in the wrong design part.

You do not need to move an item to create a usage relationship with another design part. In the desktop client, see "Relating and

Unrelating Objects" on page 108. In the web client, see "Relating and Unrelating Objects" on page 76.

Permissions The item must be in your Pending list, or you must be the Product Manager.

Desktop client **To move an item to a different design part:**

1   In an Items list, select one or more items.

2   Select Item | Move.

3   For **Parent Design Part,** type the name of the design part to own the item, or click the browse button: ... and use the Find dialog box.

4   Click the OK button.

About Uploading Files

You can upload files from your working directory into Dimensions to create a number of new items at once or to update existing items. Generally, you upload files to import a number of new items into Dimensions, for example during the start of a new product. You can also upload files to update a group of item revisions.

Uploading files differs from checking in files because the items do not need to be checked out first, and because you can add new items as well as update existing items. It is therefore a task normally performed by a Product Manager or a Change Manager.

If you are using the Dimensions web client, you can use it to upload files.

On UNIX and Windows platforms, you can run separate upload and download utilities from the command line. For more information, see the *Tool Administration Guide*.

Note that if you have Dimensions WebDAV implemented, you can use WebDAV to upload files from your operating system. For details see the *WebDAV Server Implementation Guide*.

Mapping Workfiles to Item Revisions

You use the Upload Items wizard to upload files into a workset directory. Dimensions determines where to create or update items based on:

■   The upload directory you select

■   The directory structure of the workset you are uploading to

■   Your current workset root directory

In the wizard, if you select a specific workset directory, Dimensions uses this workset directory structure together with the item's relative position in the upload directory to determine the location of the items in the workset.

If you leave the workset directory set to `<default>`, Dimensions determines the location of items in the workset as follows:

■   If the upload directory is at or below your workset root directory, it uses the position of the file relative to the workset root directory.

■   If the upload directory is outside your workset root directory, it uses the position of the file relative to the upload directory.

Examples

The following examples illustrate how Dimensions determines to which directory in the workset each file will be uploaded.
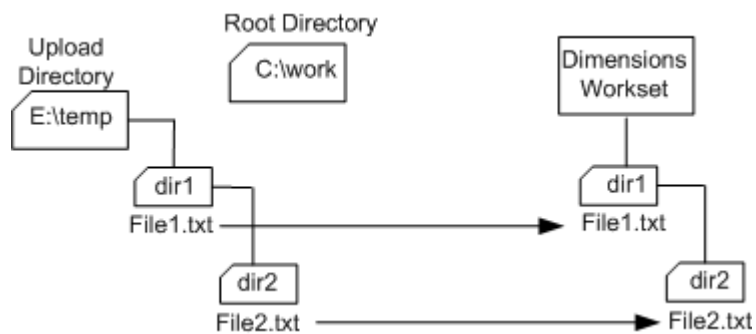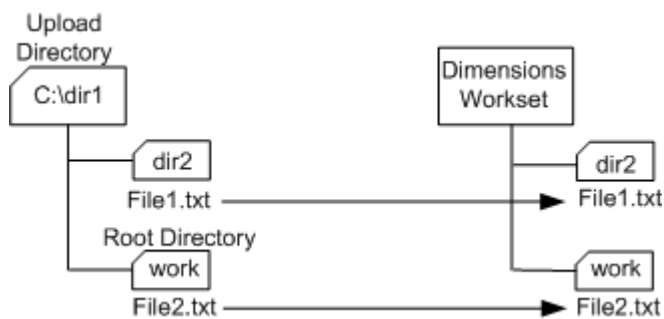
Example 1

The upload directory is at or below the workset root directory and the workset directory structure is left to default:

Workset Root Directory	Upload Directory	Workset Directory
C:\work	*C:\work\dir1*	<default>
work file: *C:\work\dir1\file1.txt*		**Item:** *dir1/file1.txt*
work file: *C:\work\dir1\dir2\file2.txt*		**Item:** *dir1/dir2/file2.txt*
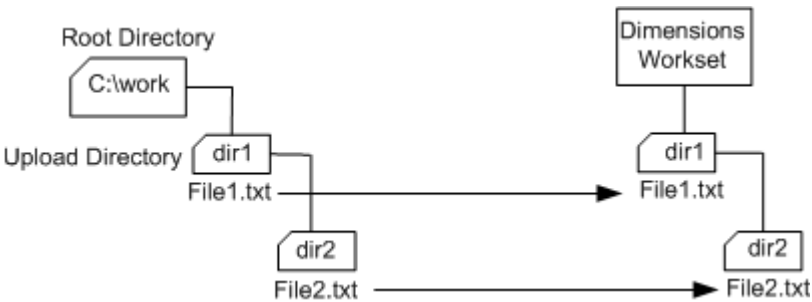
Example 2

The upload directory is at or below the workset root directory and you select a workset directory:

Workset Root Directory	Upload Directory	Workset Directory
C:\work	*C:\work\dir1*	*alpha/beta*

Workset Root Directory	Upload Directory	Workset Directory
work file: *C:\work\dir1\file1.txt*		**Item:** *alpha/beta/dir1/file1.txt*
work file: *C:\work\dir1\dir2\file2.txt*		**Item:** *alpha/beta/dir1/dir2/file2.txt*
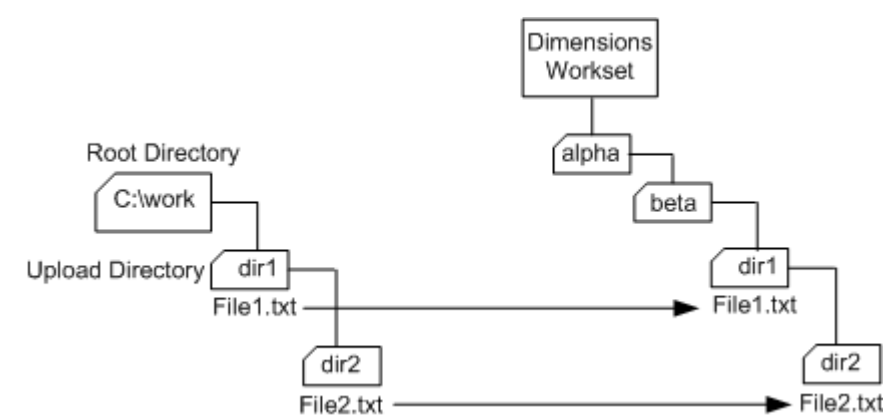
Example 3

The upload directory is outside the workset root directory and the workset directory structure is left to default:

:

Workset Root Directory	Upload Directory	Workset Directory
C:\dir1\work	*E:\temp*	<default>
work file: *E:\temp\dir1\file1.txt*		**Item:** *dir1/file1.txt*
work file: *E:\temp\dir1\dir2\file2.txt*		**Item:** *dir1/dir2/file2.txt*

Workset Root Directory	Upload Directory	Workset Directory
C:\dir1\work	*C:\dir1*	<default>
work file: *C:\dir1\dir2\file1.txt*		**Item:** *dir2/file1.txt*
work file: *C:\dir1\work\file2.txt*		**Item:** *work/file2.txt* (not just *file2.txt*)

Example 4

The upload directory is outside the workset root directory and you specify a workset directory:

Workset Root Directory	Upload Directory	Workset Directory
C:\dir1\work	*C:\dir1*	*alpha/beta*
work file: *C:\dir1\dir2\file1.txt*		**Item:** *alpha/beta/dir2/file1.txt*
work file: *C:\dir1\work\file2.txt*		**Item:** *alpha/beta/work/file2.txt*

Dimensions Worksets

Upload Directory
C:\dir1

alpha
beta

dir2
File1.txt

dir2
File1.txt

Root Directory
work
File2.txt
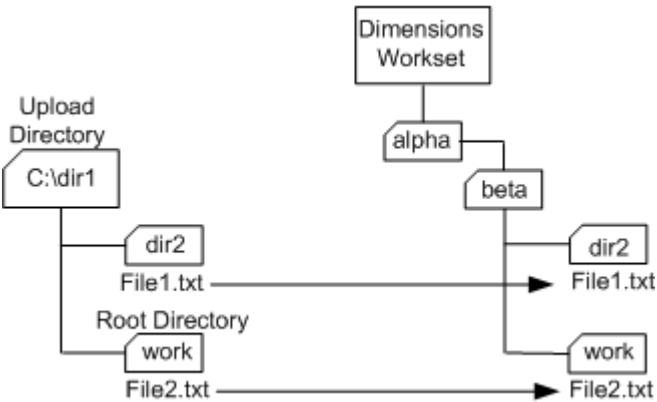
work
File2.txt

Uploading Files

Purpose   Upload files when you want to update a group of item revisions in a Dimensions workset with files from your working directory, or when you want to create new items from files.

Permissions   You must have a role that enables you to action an item from its initial lifecycle state to a new state. If the Product Manager has assigned the $ORIGINATOR role to the first transition in the lifecycle for this item type, any Dimensions user that has a role on the design part that owns the item can upload an item.

The Product Manager can upload files without a role on the initial lifecycle transition.

Web client   **To upload files:**

1   On the Items tab, do one of the following:

- If you are updating items, select the items.

- If you are creating new items, select a workset directory to contain the new items.

2   Click the Upload button:

3   Use the Upload Items wizard to select an upload directory in your working area and a workset directory in Dimensions.

For help with the Update Items wizard, click the Help button in the wizard.

About Comparing and Merging Item Files

Dimensions allows individual files to be worked on in parallel. This means that the same file can be modified by many people at the same time. At some point these derivative files need to be combined into a single new target file containing all the changes. This is called merging.

Dimensions uses a Merge/Difference tool to help you carry out this process. It provides a visual means of comparing the contents of a number of files, identifying the differences and conflicts, and

in the case of a merge operation, allowing you to select different lines individually for inclusion in the target.

When different versions are compared line-by-line with a common original version, the possibilities for each line are:

■ Added

■ Deleted

■ Changed

■ Unchanged.

When more than two files are compared, it is necessary to choose one of the versions as the common reference, referred to as the common ancestor, against which all other files (derivatives) are compared. If you want to merge these files back into a single version, referred to as the target, you will need to manually resolve the conflicts between them. A conflict occurs where a line has been added, deleted, or changed differently between different derivatives. You will need to decide, for each conflict, which version to include in the target. You can use item files or files in your work area for this process.

The Dimensions desktop client uses the Serena ChangeMan Merge Tool for this purpose. Use the online help in that tool or see the chapter "Comparing and Merging Files" for details of how to use it.

The tool invoked for differencing and merging depends on the platform you are using:

■ Windows: the Serena ChangeMan Merge Tool is invoked. Use the online help in that tool or see the chapter "Comparing and Merging Files" for details of how to use it.

■ UNIX: the mgdiff tool is invoked. Note that you cannot compare more than two files using this tool. Use the Help option for details of how to use it. UNIX users can also choose to plug in their own differencing tools, such as xxdiff. For

further details, read the *merge_exec* script in your client installation.

Merging Item Revisions and Files

Purpose   Merge item revisions to combine the updates made to each of them in parallel into a single new revision.

Once you have specified details for the new item revision, Dimensions invokes either the Serena ChangeMan Merge Tool or, in the case of UNIX platforms, the mgdiff tool, to enable you to perform the merging of the contents of the item files.

Permissions   The item must be at the initial lifecycle state and must be in your Pending list, or you must be the Product Manager.

Web client   **To merge item revisions:**

1   On the Pending tab or Items tab, select one or more item revisions (of the same item).

NOTE If you are working on a UNIX platform, you will not be able to merge more than two item revisions or files.

2 Click the More button ▣ , and select Merge I Item revision.

3 In the Merge dialog box, verify that you have selected the correct item revisions.

4 Complete the options on the Merge dialog box, choosing the item revisions and/or workfiles you want to compare, and which of them you want to use as the base (ancestor) for comparison.

  ■ In the **Base** field, you can choose between an item revision and a workfile for the base (ancestor) for the merge

operation. Click the link to toggle between these two options.

■ In the **Revisions** field, click the ✚ icon to add another item revision and choose a revision from the list.

■ In the **Workfiles** field, click the ✚ icon to add another file and click the ▭ button to choose it.

■ Click the ━ icon to remove an item revision or workfile from your selection.

5   When you have completed the dialog box, click OK. This will invoke the merge/difference tool for the platform you are using:

■ Windows: the Serena ChangeMan Merge Tool is invoked. Use the Help option or see the chapter "Comparing and Merging Files" for details on how to use and configure this tool.

■ UNIX: the mgdiff tool is invoked. Use the Help option for details of how to use this tool.

6   When you have finished, exit the merge tool. In the Results dialog box, click Continue to check in the target file, and then click Close.

Desktop client   **To merge item revisions:**

1   In an Items list, select the item whose revisions you want to merge.

2 Select Item | Merge Item Revisions.
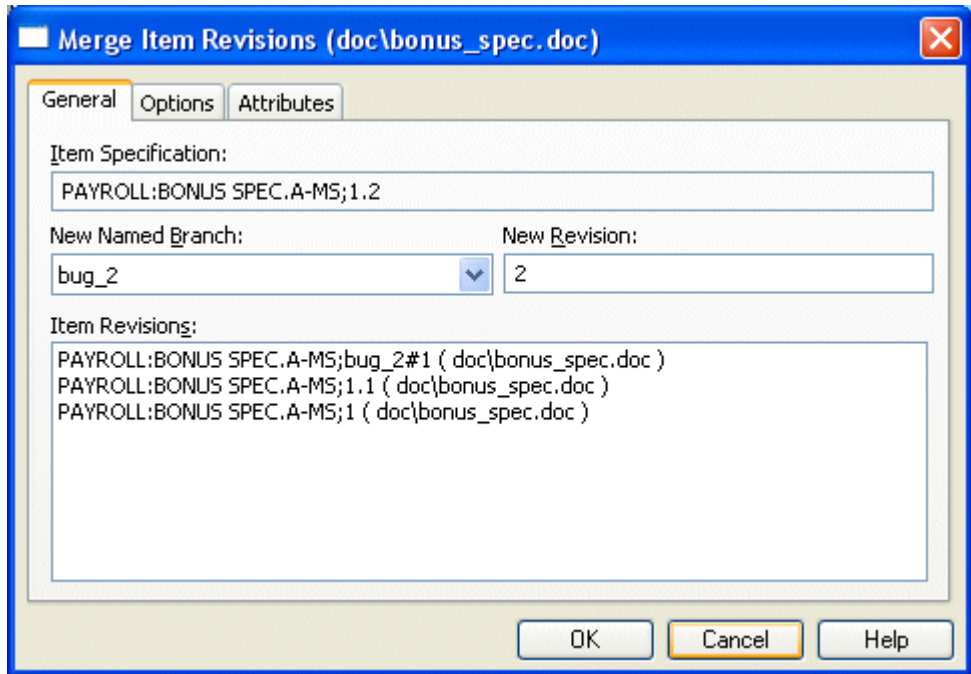
3 In the General tab in Item Revisions, verify that you have the correct items.

4 Select the items revisions that you want to merge.

5 Type the New Named Branch and the New Revision if you want to override the default values.

6 Optionally, on the Options tab, for **Change Document ID**, type the name of the related change document, or click the browse button: […] and use the Find dialog box. Choose a status from the **Status** list.

7 If you want the merge to be performed automatically, provided there are no conflicts, check **Automatic Merge**.

8 Enter a comment in the **Reason for Item Merge** field

9 On the Attributes tab, type or select values.

Attributes in bold are required. Attributes in italics cannot be modified.

10   Click OK. The Serena ChangeMan Merge Tool opens, unless you chose Automatic Merge and there were no conflicts.

11   Follow the instructions in the online help for the Serena ChangeMan Merge Tool, or see the chapter "Comparing and Merging Files" for more details.

Comparing Item Revisions and Files

Purpose

Compare item revisions and files to view the differences between them without merging their content.

Once you have specified details for the new item revision, Dimensions invokes either the Serena ChangeMan Merge Tool or, in the case of UNIX platforms, the mgdiff tool, to enable you to view the differences between the items or files.

Permissions

No special permissions required.

Web client

To compare item revisions:

1   On the Pending tab or Items tab, select one or more item revisions (of the same item).

NOTE If you are working on a UNIX platform, you will not be able to merge more than two item revisions or files.

2   Click the More button: ▶ , and select Show Differences.
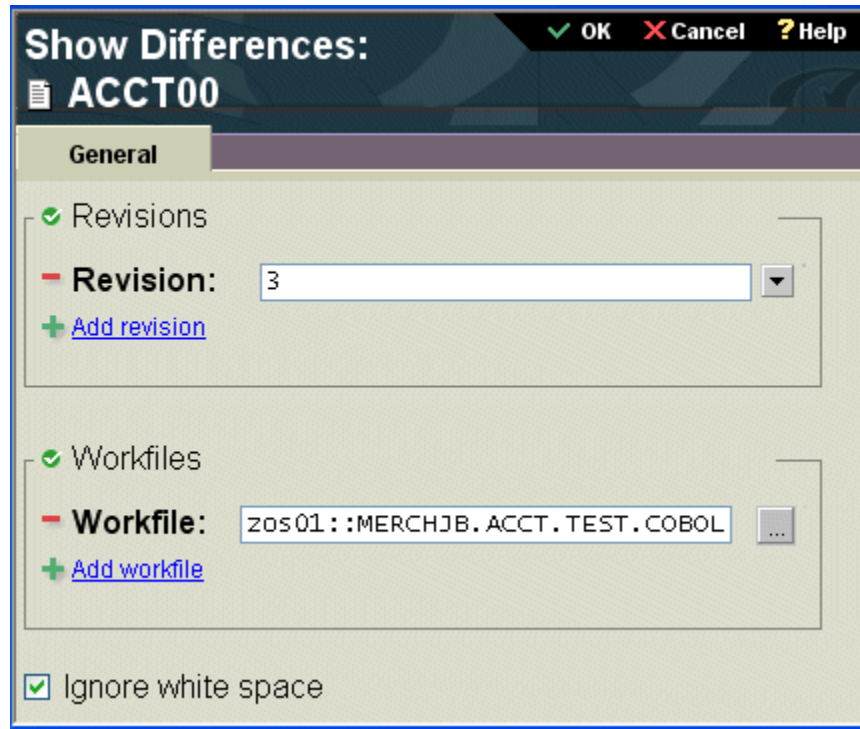
3   In the Show Differences dialog box, verify that you have selected the correct item revisions.

4   Complete the options on the Merge dialog box, choosing the item revisions and/or workfiles you want to compare

   ■ In the **Revisions** field, click the ✚ icon to add another item revision, and choose one from the list.

   ■ In the **Workfiles** field, click the ✚ icon to add another workfile file, and click the ▦ button to choose it.

   ■ Click the ▬ icon to remove an item revision or workfile from your selection.

5   When you have completed the dialog box, click the OK button. This will invoke the merge/difference tool for the platform you are using:

■ Windows: the Serena ChangeMan Merge Tool is invoked. Use the Help option or see the chapter "Comparing and Merging Files" for details on how to use and configure this tool.

■ UNIX: the mgdiff tool is invoked. Use the Help option for details of how to use this tool.

6   When you have finished, exit the merge tool, and in the Results dialog box click Close.

Desktop client   **To compare item revisions:**

1   In an Items list, select the item whose revisions you want to compare.

2   Select Item | Compare.

3   Do one of the following:

■ If you want to compare the revision with a different revision of the same item, select it in the **Another Revision** List.

- If you want to compare the revision with a file in your work area, check **A User Filename** and click the browse button: [...] to find it.

- If you want to compare the revision with a revision of a different item, check **Another Item,** click the browse button: [...] and use the Find dialog box.

4 Click the OK button. This will take you into the merge tool.

5 Follow the instructions in the online help for the Serena ChangeMan Merge Tool, or see the chapter "Comparing and Merging Files" for more details.

8 Managing Worksets

In this Chapter:

About Worksets

In Dimensions a *workset* is a dynamic collection of items related to a particular development activity. All item operations are done within the context of a workset. Worksets provide a way to organize items and control access to them. A workset is used to define:

■ **A view for users**. Worksets are dynamic views of items needed to fulfill a certain purpose—for example, building a new enhancement into the current release or fixing a bug in an existing release.

■ **Role assignments**. Project roles can be assigned to users at the workset level or at the global level. A role assigned at the workset level overrides any global role assignment.

■ **Directory structure**. Within a workset, items are organized in a directory structure. When items are checked out of a workset, directories matching physical directories are created on the hard drive relative to the root directory.

■ **Root directory**. Each workset has a root directory either on your hard drive or on a remote node. Dimensions performs all checkout, get, and checkin operations to or from the root directory.

■ **Workset filenames**. Workset filenames represent the location of an item in the user's physical directory and may not be the same as the item ID.

A workset is only a collection of items at the conceptual level. At the physical level, that is where item files are stored in item libraries, you are not creating new copies of files when you create a workset.

About Managing Worksets

A Product Manager can creates, delete and merge worksets within the product. That person can also assign a Workset Manager role for a workset, although in practice the Product Manager and Workset Manager roles are often held by the same person.

The Workset Manager sets up and maintains the workset directory structure, adds or deletes item revisions, sets the workset flags that regulate users working within worksets, and locks worksets to create baselines.

The Product Manager can modify workset permissions to allow any user with a role on the product to create and update a workset.

About Workset Directories

A *workset directory* is a folder in the workset structure that contains items. You can do the following with workset directories:

■   Add a new workset directory to the workset structure and add items to that new directory.

■   Change the location of a workset directory.

■   Rename a workset directory.

■   Delete an item from the workset, provided that the item does not belong to a baseline or release.

About Workset Root Directories

A *workset root directory* is a working location on a local hard drive or network node for items that are checked out, checked in, or copied. Items are placed in the working location relative to their workset directories.

Each user can set a different root directory for each workset. Changes made to the location of the workset root directory do not affect other users of that workset.

Selecting a Workset and Workset Root Directory

Purpose   When you start the web client and log into Dimensions, the last workset that you were using is automatically opened. You can also select a different workset.

You must select a workset root directory for each workset you use. A *workset root directory* is a working location on your hard drive or a network node for items that are checked out, checked in, or copied.

Permissions   No permissions required.

Web client   **To select a workset:**

1   In the status area, click the workset link:

    PAYROLL:WS_DEV_REL_1

2   From the **New Workset** list, select a workset. You can use the **Filter** field to restrict the list.

3   Click OK.

To select a workset root directory:

1 In the status area, click the root directory link: c:\temp\foo

2 In the **Set Root Directory** field, do one of the following:

■ Click Browse, select a directory, and click OK.

■ Type the path name of the directory.

If the directory is on your local computer, type a full pathname. For example, to use the `payroll` directory on the C: drive of a Windows computer, type `c:\payroll`.

If the directory is on a remote node, begin the pathname with the node name followed by two colons (::). For example, to use the `payroll` directory on the UNIX node `HOST1`, type the pathname `HOST1::/payroll`.

3 Click OK.

Purpose   When you start the desktop client and log into Dimensions, a default workset is automatically opened. You can select a different workset to work in temporarily, or you can select a different workset as your default.

You must select a workset root directory for each workset you use. A *workset root directory* is a working location on your hard drive or a remote node for items that are checked out, checked in, or copied. If you have not specified a workset root directory, you are prompted to do so the first time you access the workset.

Permissions   No permissions required.

Desktop client   **To select a workset:**

1 Close all open content windows.

2 Select Workset | Change, or click the Change Workset button:

3 From the **Product** list, select a product.

4 From the **Workset** list, select a workset.

5   Do one of the following:

- To use this workset temporarily, click Open.

- To make this your default workset, click Make Default.

To select a recently used workset:

Do one of the following:

- Choose **File | Recent Worksets** and select a workset from the list.

- Select a workset from the workset directory list on the toolbar: PAYROLL:WS_DEV_WIN

NOTE By default, Dimensions stores your four most recently used worksets. To change this default, use the Preferences dialog box. See .

NOTE If the associated workset root directory does not exist, you are prompted with a message asking if you wish to create it. To specify a different directory, use the Change Root Workset Directory dialog box as described below.

To switch to your default workset:

Click the Home Workset button: to the left of the workset directory list on the toolbar.

To select a workset root directory:

1   Select Workset | Directory | Change, or click the Change Directory button:

2   In the Change Root Workset Directory dialog box, do one of the following:

- Click Browse, select a directory in the Browse for Folder dialog box, and click OK.

■ Type the path name of the directory.

If the directory is on your local computer, type a full pathname. For example, to use the `payroll` directory on the C: drive of a Windows computer, type `c:\payroll`

If the directory is on a remote node, begin the pathname with the node name followed by two colons (::). For example, to use the `payroll` directory on the UNIX node `HOST1`, type the pathname `HOST1::/payroll`

3   Click OK.

About Creating Worksets

You can create a workset in the following ways:

■ From an existing workset or baseline.

■ By creating an empty workset and adding items later.

■ By merging existing worksets. See "Creating a New Merged Workset" on page 277.

If you create a workset from an existing workset or baseline, the new workset contains all the item revisions included in the original workset or baseline.

Creating a Workset

Purpose   Create a new workset when you wish to create a group of items for a new development or a new branch of an existing development.

Permissions   You must have workset permissions on the product, or you must be a Workset Manager.

Web client   **To create an empty workset:**

1 On the Items tab, or the Pending tab with items selected, click Manage Worksets:
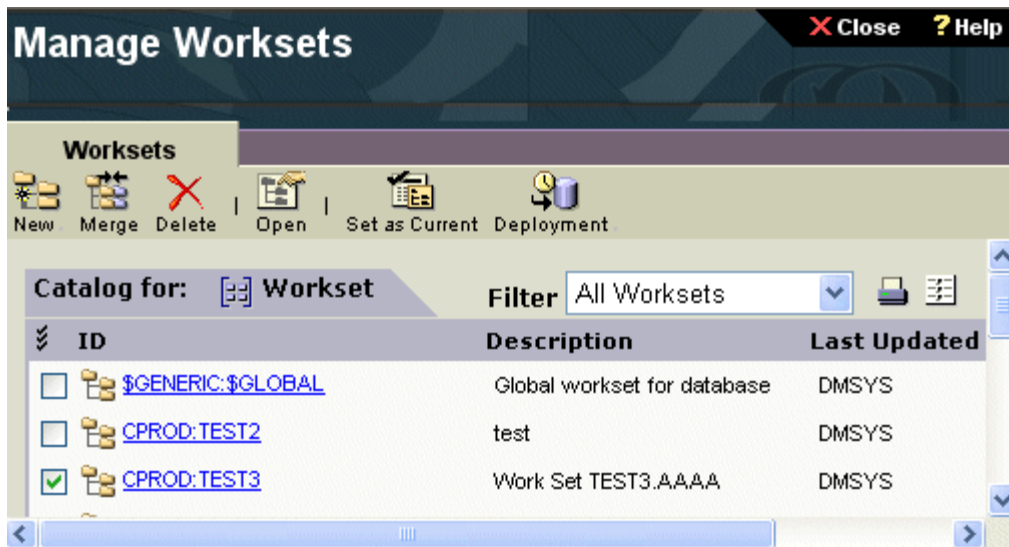
2 Click New: and select **Empty Workset**.

3 On the General tab of the New Workset dialog box, for **ID**, type a name for the new workset.

4 For **Description**, type a description for the new workset.

5 From the **Create in Product** list, select the product where you want to create the workset.

6 To associate the workset with a project for Serena ChangeMan Builder, select one from the **Project** list.

7 Click the Options tab and do the following:

- For Workset Types, select **Trunk** or **Branch**.

- For Revision Generation, select **Forced** or **Optional**.

- For Workset State, select **Locked** or **Unlocked**.

- From the **Branches assigned to this workset** list, select branches to which future revisions in this workset may be assigned.

- If you want to select a branch as the default, select the corresponding radio button in the second column of the **Branches assigned to this workset** list.

8   Click OK.

To create a new workset based on an existing workset:

1   On the Items tab, or the Pending tab with items selected, click Manage Worksets:

2   Optionally, on the Catalog for Workset table, select the workset on which you want to base the new one.

3   Click New: and select **Based on Workset.**

4   On the General tab of the of the New Workset dialog box, if you have not selected a workset, select the workset on which the new workset will be based. If you want to reduce the list of worksets, type a string in the **Filter** field to display only worksets containing that string in their name.

5   For **ID**, type a name for the new workset.

6   For **Description**, type a description for the new workset.

7   From the **Create in Product** list, select the product where you want to create the workset.

8   To associate the workset with a project for Serena ChangeMan Builder, select one from the **Project** list.

9   To automatically populate the build area(s) for the associated project, check the **Populate associated project workset** check box. To view a report, check the **Show report of build area population in the Details** dialog check box.

10 Click the Options tab and do the following:

- For Workset Types, select **Trunk** or **Branch**.

- For Revision Generation, select **Forced** or **Optional**.

- For Workset State, select **Locked** or **Unlocked**.

- From the **Branches assigned to this workset** list, select branches to which future revisions in this workset will be assigned.

- If you want to select a branch as the default, select the corresponding radio button in the second column of the **Branches assigned to this workset** list.

11 Click OK.

To create a new workset based on a baseline:

1 On the Items tab, or the Pending tab with items selected, click Manage Worksets:

2 Click New: and select **Based on Baseline.**

3 On the General tab of the of the New Workset dialog box, select the baseline on which the new workset will be based. If you want to reduce the list of baselines, type a string in the **Filter** field to display only baselines containing that string in their name.

4 For **ID**, type a name for the new workset.

5 For **Description**, type a description for the new workset.

6 From the **Create in Product** list, select the product where you want to create the workset.

7 To associate the workset with a project for Serena ChangeMan Builder, select one from the **Project** list.

8 To automatically populate the build area(s) for the associated project, check the **Populate associated project workset** check

box. To view a report, check the **Show report of build area population in the Details** dialog check box.

9   Click the Options tab and do the following:

■ For Workset Types, select **Trunk** or **Branch**.

■ For Revision Generation, select **Forced** or **Optional**.

■ For Workset State, select **Locked** or **Unlocked**.

■ From the **Branches assigned to this workset** list, select branches to which future revisions in this workset will be assigned.

■ If you want to select a branch as the default, select the corresponding radio button in the second column of the **Branches assigned to this workset** list.

10   Click OK.

Desktop client   **To create a workset:**

        1 Select File | New | Workset.

        2 On the General tab of the New Workset dialog box, for **Product ID**, select the product where you want to create the workset.

        3 For **Workset ID**, type a name for the new workset.

        4 For **Description**, type a description for the new workset.

        5 Do one of the following:

           ■ To create an empty workset, select the **Empty Workset** checkbox.

           ■ To create a workset based on a workset, select one from the **Workset** list.

           ■ To create a workset based on a baseline, select one from the **Baseline** list.

6   Click the Options tab and do the following:

- For Workset Types, select **Trunk** or **Branch**.

- For Revision Generation, select **Forced** or **Optional**.

- For Workset State, select **Locked** or **Unlocked**.

- From the **Named Branch** list, select the branches to which future revisions in this workset may be assigned.

7   Click the Project tab and do the following:

- To associate the workset with a project for Serena ChangeMan Builder, click **This workset is associated with the following project**, and select a project from the list below.

- To automatically populate the build area(s) for the associated project, check the **Populate associated project workset** check box.

- To create an audit report after the workset has been populated, for **Report**, enter the pathname and filename, or click Browse, select a directory and click Save.

8   Click OK.

Renaming a Workset

Purpose   Rename a workset when you want to change the workset ID.

You must have workset permissions on the product, or you must be a Workset Manager.

Web client   **To view or edit workset properties:**

1   On the Items tab, or the Pending tab with items selected, click Manage Worksets:

2 Do one of the following:

- Select a workset and click Open.

- Click the workset name.

3 Click Open:

4 On the General tab, Enter the new ID.

5 Click OK

Desktop client   **To rename a workset:**

1 Select the Workset.

2 Select Workset | Rename.

3 For **New Workset ID**, type the new workset identifier.

4 Click OK.

Creating a Workset Directory

Purpose   Use this feature when you want to create a new directory in the current workset structure.

Permissions   You must have workset permissions on the product or be a Workset Manager.

Web client   **To create a new directory:**

1 On the Items tab, check that the workset navigation tree is displayed. If the design part tree is currently displayed, on the toolbar click More and select Switch Tree.

2 Select the workset directory that will contain the new directory.

3 Click New:

4   In the New Workset Directory dialog box, for **New Child Workset Directory**, type the new directory name.

5   Click OK.

Desktop client   **To create a workset directory:**

1   In a Workset tree, select the workset directory that will contain the new directory.

2   Select File | New | Directory.
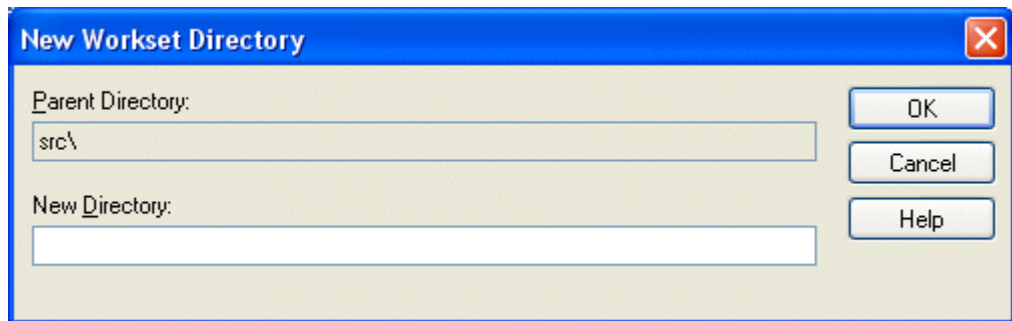
3   For **New Directory**, type a new directory name.

4   Click OK.

Deleting a Workset Directory

Purpose   Delete a workset directory when it is no longer needed.

NOTE You can delete worksets directories only when the directories do not contain item revisions and subdirectories.

Permissions   You must have workset permissions on the product or you must be a Workset Manager.

Web client	**To delete a workset directory:**

1 On the Items or Pending tab, select a workset directory.

2 Click More: and select Delete.

3 In the Delete dialog box, verify that you selected the correct directory, and click Yes.

Desktop client	**To delete a workset directory:**

1 In a Workset tree, select a workset directory.

2 Select Workset | Directory | Delete.

3 In the Delete Directory dialog box, verify that you have selected the correct directory, and click OK.

Renaming a Workset Directory

Purpose	Rename a workset directory to reorganize the structure of a workset.
Permissions	You must have workset permissions on the product or you must be a Workset Manager.
Web client	**To rename a workset directory:**

1 On the Items tab, select the workset directory you want to rename.

2 Click More: and select Rename.

3 For **New Name**, type the new name for the workset directory.

4 Click OK.

Desktop client	**To rename a workset directory:**

1 In a Workset tree, select a workset directory.

    2   Select Workset | Directory | Rename.

    3   Type the new directory name and press Enter.

Moving a Workset Directory

Purpose

Move a workset directory to reorganize the directory structure of a workset.

Permissions

You must have workset permissions on the product or you must be a Workset Manager.

Web client

To move a workset directory:

    1   On the Items tab, select the workset directory you want to move. Check that no items are selected in the content pane.

    2   Click More: and select Move.

    3   For **New Location**, type the name of the parent workset directory that will contain the directory.

    4   Click OK.

Desktop client

To move a workset directory:

    1   In a Workset tree, select the workset directory to move.

    2   Select Workset | Directory | Move.
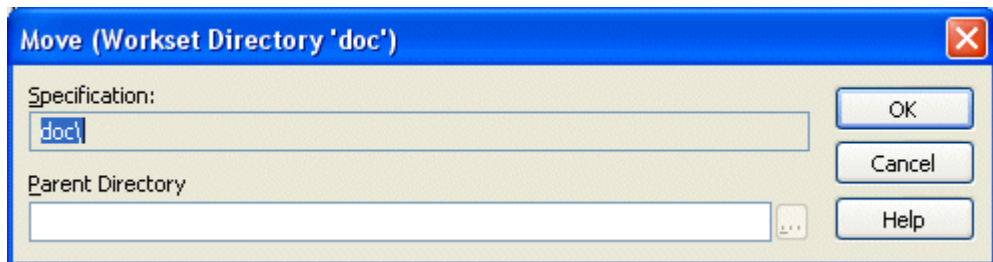
3 For a **Parent Directory**, type the new workset directory pathname.

4 Click the OK button.

Deleting a Workset

Purpose   Delete a workset when development work is completed and the workset has been used to create a baseline for a release.

Permissions   You must have workset permissions on the product, or you must be a Workset Manager.

Web client   **To delete a workset:**

1 On the Items or Pending tab, select a workset.

2 On the toolbar, click More: and select Delete.

3 In the Delete dialog box, verify that you have selected the correct workset and click Yes.

Desktop client   **To delete a workset:**

1 Select Workset | Delete.

2 In the Delete Workset dialog box, from the **Workset** list select a workset.

CAUTION! If the **Use Current Workset** checkbox is selected, you are about to delete your current workset. Be careful not to do this inadvertently.

---

3 Click OK.

Viewing or Editing Workset Properties

Purpose   View workset properties when you want to see details such as the status, creation date, last update date, or the user who last updated the workset.

Edit the workset properties when you wish to change any of the default settings for the workset, or the available branches for item revisions.

Permissions   You must have workset permissions on the product, or you must be a Workset Manager.

Web client   **To view or edit workset properties:**

1   On the Items tab, or the Pending tab with items selected, click Manage Worksets:

2   Select the workset whose properties you want to view or edit.

3   Click Properties:
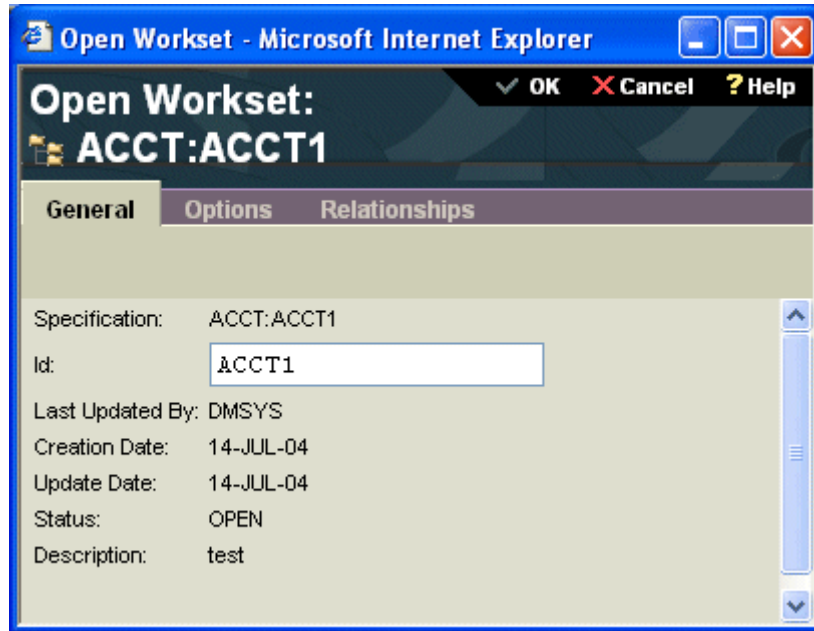
4   On the General tab, change the workset ID, if required.

5   On the Options tab, view or edit the properties.

6   On the Relationships tab, view the related baselines or worksets.

7   Click OK.

Desktop client   **To view or edit workset properties:**

1   In a Workset tree, select a workset.

2   Select Workset | Set Flags.
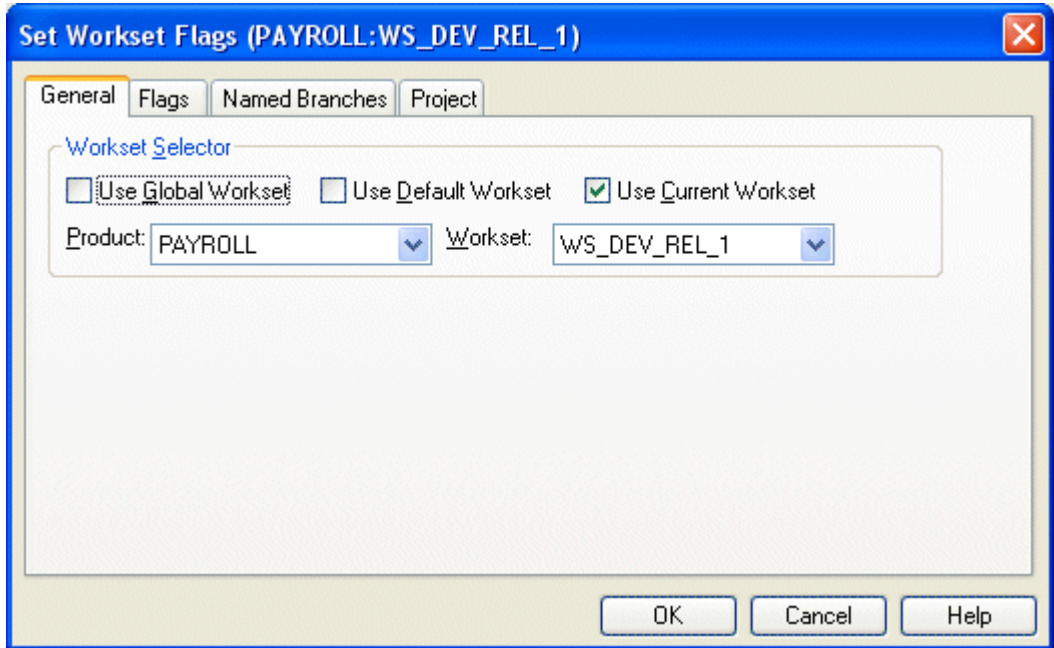
3   On the General tab, select a workset Product ID and Workset ID.

4   Optionally, select the Global workset, the Default Workset or the Current Workset as the existing workset.

5   Click the Flag tab and do the following:

  ■   For Workset Types, select **Trunk** or **Branch**.

  ■   For Revision Generation, select **Forced** or **Optional**.

  ■   For Workset State, select **Locked** or **Unlocked**.

6   Click the Named Branches tab and select named branches to be available for future revisions.

7   Click the Project tab and do the following:

  ■   To associate the workset with a project for Serena ChangeMan Builder, click **This workset is associated with**

the following project, and select a project from the list below.

■ To automatically populate the build area(s) for the associated project, check the **Populate associated project workset** check box.

■ To create an audit report after the worskset has been populated, for **Report**, enter the pathname and filename, or click Browse, select a directory and click Save.

8 Click OK.

Merging Worksets

Purpose   Merge worksets when you want to merge parallel developments. For example, you might want to merge the Maintenance and Development, or a previous customization into the latest development release. Rather than merging at the item level, you can merge the worksets, either into an existing workset or into a new one.

Permissions   You must be the Product Manager or have the Workset Manager role for the target workset.

Web client | **To merge worksets into an existing workset:**

1 On the Items tab, or the Pending tab with items selected, click Manage Worksets:
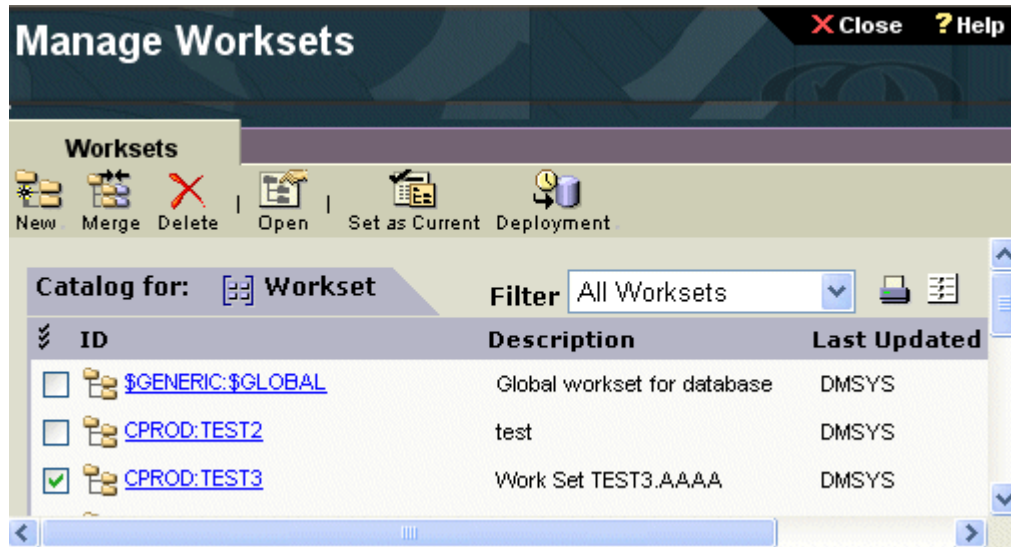
2 Select the source workset from which you want to merge item revisions, and click Merge:
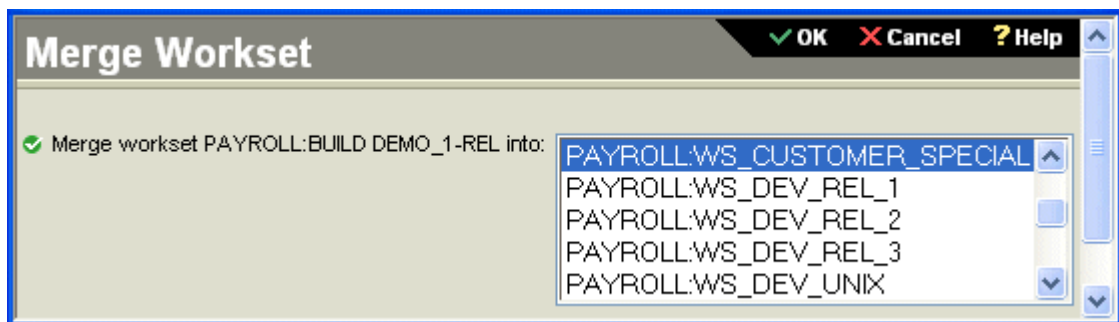
3 Select the target workset into which the source worksets will be merged.

4 Click OK.

Desktop client **To merge worksets into an existing workset:**

1 Select Workset | Merge Worksets.
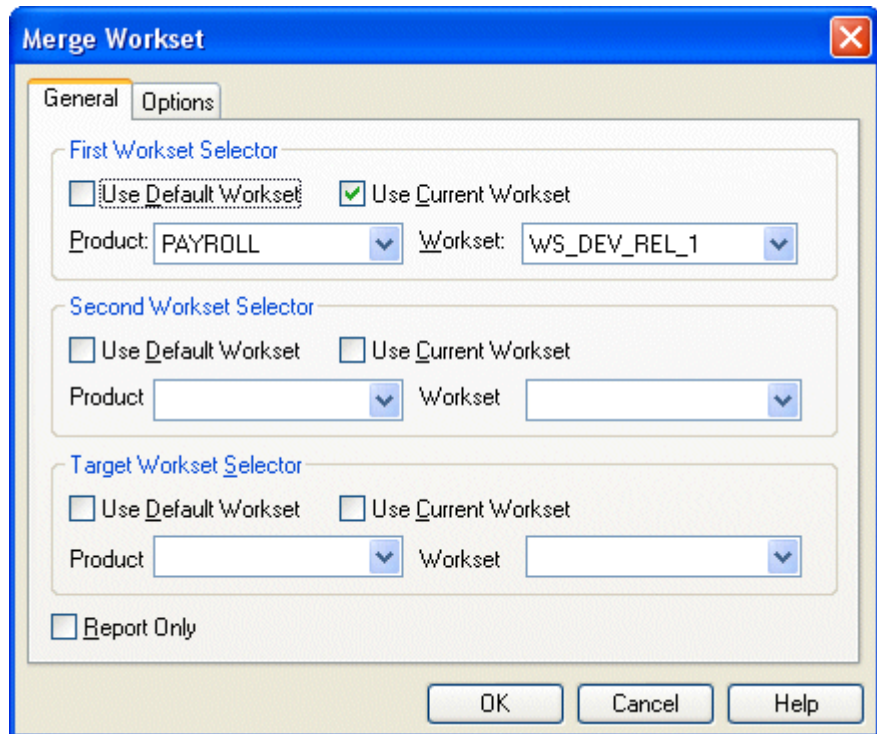
2 On the General tab of the Merge Worksets dialog box, do the following:

- For **First Workset Selector,** select the first workset that you want to merge.

- For **Second Workset Selector,** select the second workset that you want to merge.

- For **Target Workset Selector,** select the workset into which the first and second worksets will be merged.

3 Click the Options tab and do the following:

■ For Workset Types, select **Trunk** or **Branch**.

■ For Revision Generation, select **Forced** or **Optional**.

■ For Workset State, select **Locked** or **Unlocked**.

■ From the **Named Branch** list, select the branches to which future revisions in this workset will be assigned.

4   Click OK.

Creating a New Merged Workset

Purpose   Create a new merged workset to merge the item revisions from two other worksets that have been updated in parallel into one new workset.

Permissions   You must have workset permissions on the product, or you must be a Workset Manager.

Web client   **To create a new merged workset:**

   1   On the Items tab, or the Pending tab with items selected,
          click Manage Worksets:
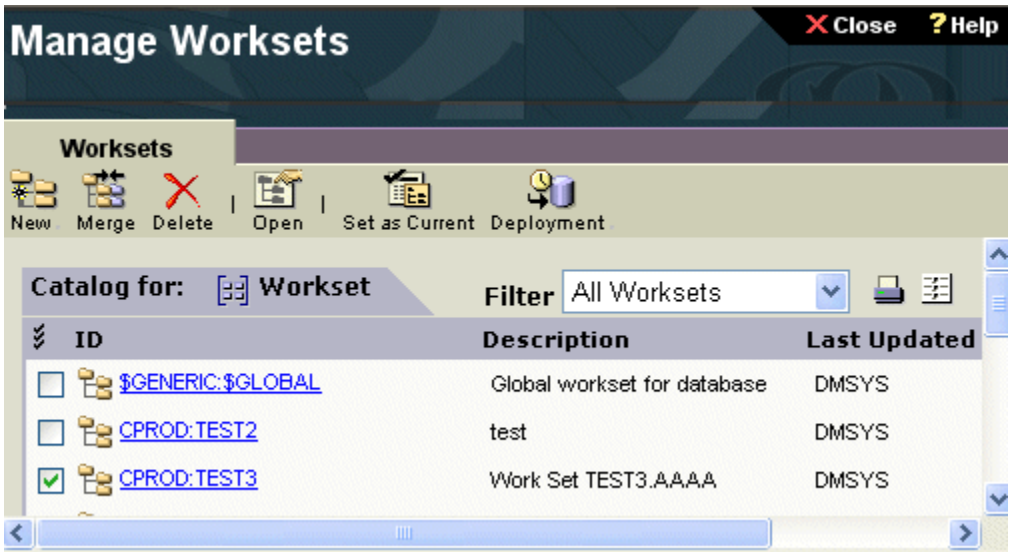
   2   From the Manage Worksets dialog box, select one or two
          worksets to be merged.

3   Click New: and select Merged Workset.
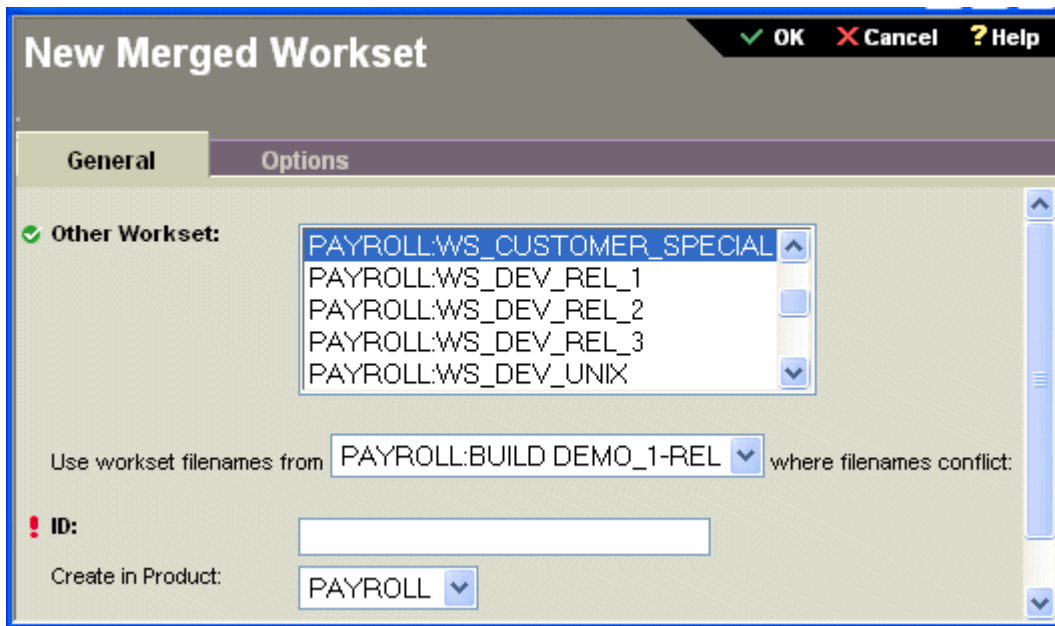
4   If you selected one workset, on the General tab of the New Merged Worksets dialog box, from the **Other Workset** list select the second workset you want to merge.

5   From the **Use workset filenames from <workset name> where filenames conflict** list, select the workset from which you want to use item revisions in the event of a conflict.

6   For **ID**, type a name for the new workset.

7   From the **Create in Product** list, select the product where you want to create the new merged workset.

8   Click the Options tab and do the following:

   ■   For Workset Types, select **Trunk** or **Branch**.

   ■   For Revision Generation, select **Forced** or **Optional**.

   ■   For Workset State, select **Locked** or **Unlocked**.

■ From the **Branches assigned to this workset** list, select
branches to which future revisions in this workset will be
assigned.

9   Click OK.

Removing an Item Revision from a Workset

Purpose

Remove an item from a workset when the item is no longer
required for the current workset or when the item was added to
the workset by mistake.

Permissions

You must have permission to remove items or you must be a
Workset Manager.

Web client

To remove items from a workset:

1   On the Items tab, or the Pending tab with items selected,
select one or more items.

2   Click More: and select Delete.

3   In the Delete dialog box, verify that you have selected the
correct item(s).

4   From the **Delete the Following Revisions from** list, select
Workset.

5   Click Yes.

Desktop client

To remove items from a workset:

1   Select one or more items.

2   Select Item | Remove From Workset.

3   In the **Item Specification** field, verify that you have selected
the correct item(s).

4   Click OK.

Exporting an Item to a Workset

Purpose
: Export an item from your current workset to another workset when you want to use a copy of that item in the other workset. You can also export multiple items.

Permissions
: You must have permission to export items or you must be a Workset Manager.

Web client
: **To export an item to a workset:**

   1   Select one or more items. If the revision you require is not visible, check that **All revisions** is selected in the filter list.

   2   Click More: ![More...] and select Export to Workset.
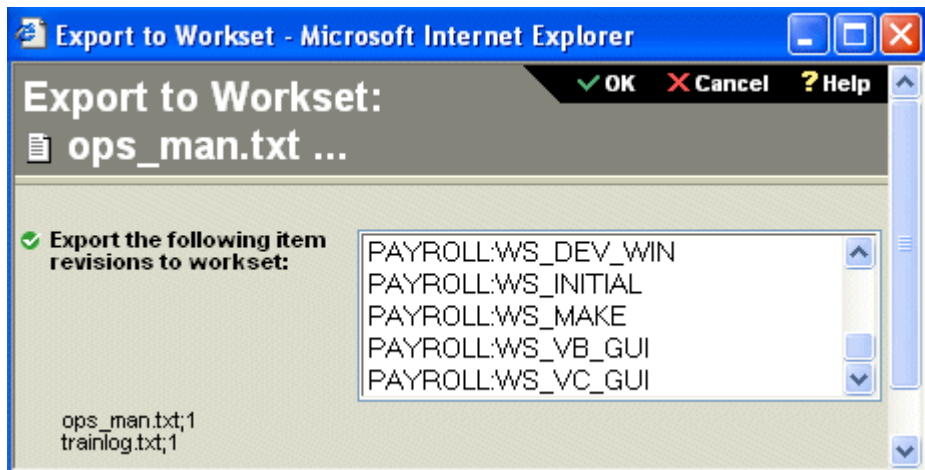
   3   From the **Export the following item revisions to workset** list, select the target workset to export the item to.

   4   Verify that you have selected the correct item(s) to export.

   5   Click OK.

Desktop client
: **To export an item from a workset:**

   1   Select one or more items.

2 Select Item | Export to Workset.
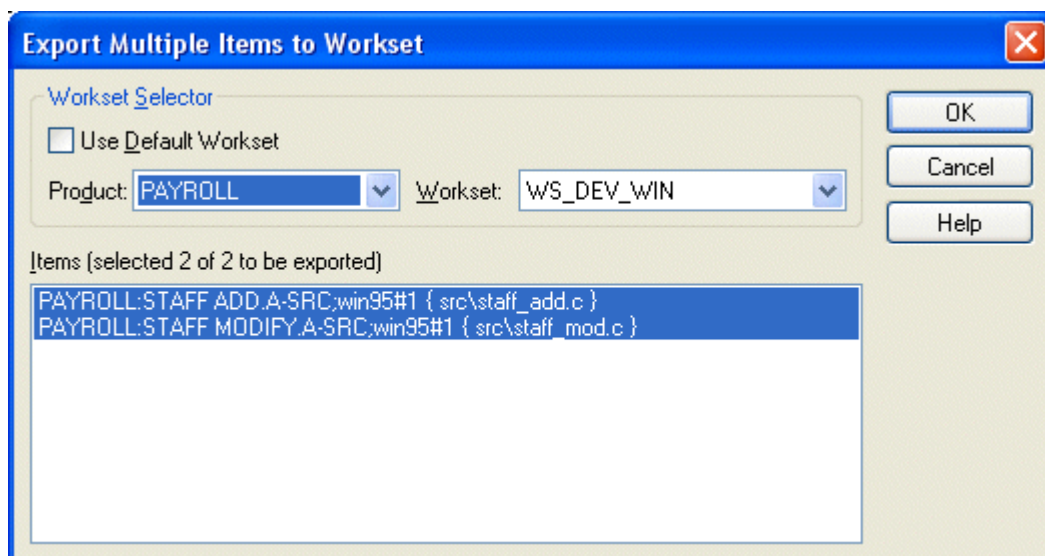
Export Multiple Items to Workset

Workset Selector

☐ Use Default Workset

Product: PAYROLL   Workset: WS_DEV_WIN

Items (selected 2 of 2 to be exported)

PAYROLL:STAFF ADD.A-SRC;win95#1 { src\staff_add.c }
PAYROLL:STAFF MODIFY.A-SRC;win95#1 { src\staff_mod.c }

OK

Cancel

Help

3 In the **Item Specification** field, verify that you have selected the correct item(s) to export.

4 Select the product and workset you want to export the item(s) to. To export to your default workset, select the **Use Default Workset** checkbox.

5 Click OK.

About Resolving Conflicting Item Revisions

Item revisions in the same workset conflict when the same item revision has had more than one new item revision created from it, thus creating a branch in its update history.
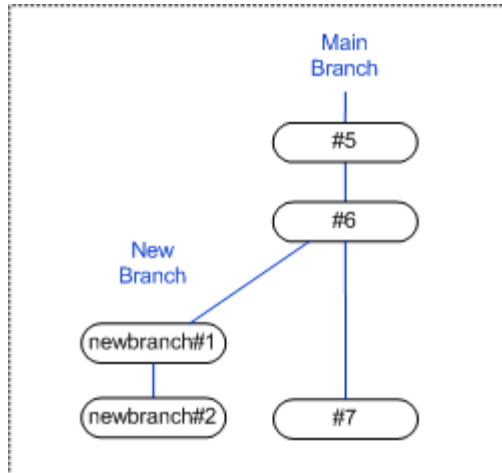
In the diagram above, revisions *newbranch#2* and *#7* conflict because they both have a common ancestor, revision *#6*. This means that to have only one current latest version of that item in the workset it is necessary to merge the differences between these two revisions into one.

Dimensions can automatically resolve these conflicting revisions provided there are no conflicts within the contents of the files. A conflict occurs where a line has been added, deleted, or changed differently between the different versions. This means that Dimensions has no way of choosing which of the conflicting lines to include in the merged revision, so you must manually select it.

The Resolve option in the desktop client searches your selected workset for conflicting item revisions. You then have the option to:

- Invoke the Serena ChangeMan Merge Tool manually to resolve conflicting lines in the file content for individual items.

- Auto resolve the differences between the files for a selected item. This means that Dimensions attempts to automatically resolve the differences between the item files. If it is able to do this, it merges them and creates a new revision.

- Auto resolve the differences for all of the conflicting item revisions found in the workset. This means that Dimensions attempts to automatically merge each conflicting item to create a new revision, and lists any that it is unable to resolve. You can then select and resolve each of these by manually invoking the Serena ChangeMan Merge Tool.

Resolving Conflicting Item Revisions in a Workset

Purpose   Resolve conflicting item revisions after merging worksets if you have received an e-mail notifying you of conflicts when merging worksets. You can resolve conflicts manually or automatically.

Permissions

Desktop client

If there are items which have conflicting lines, versions of a line that differ between different derivatives, you have to resolve them manually. For manual file merging, Dimensions invokes the Serena ChangeMan Merge Tool. Follow the instructions in the online help for this tool or see "Comparing and Merging Files".

Permissions   You must be the Product Manager or have the Workset Manager role for the workset.

Desktop client   **To manually resolve item revision conflicts:**

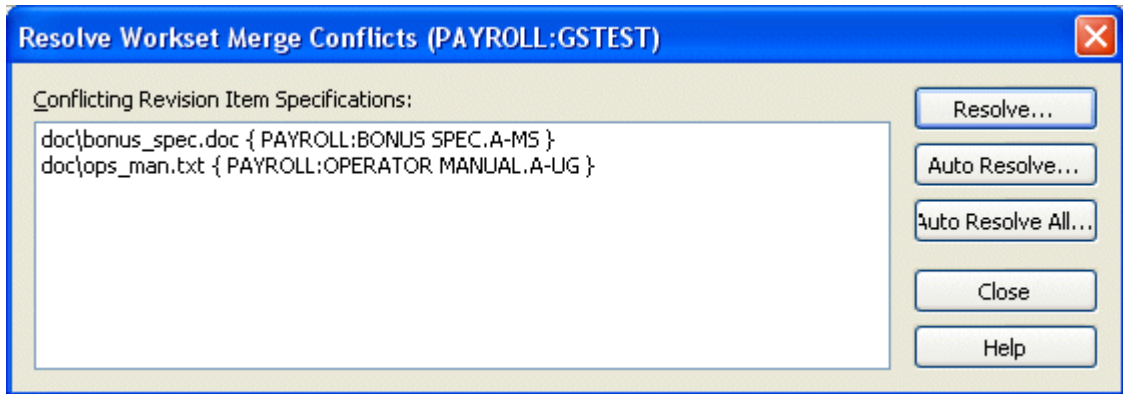1   In a Workset containing conflicting item revisions, select the top-level folder.

2 Select Workset | Resolve.

Resolve Workset Merge Conflicts (PAYROLL:GSTEST)

Conflicting Revision Item Specifications:

doc\bonus_spec.doc { PAYROLL:BONUS SPEC.A-MS }
doc\ops_man.txt { PAYROLL:OPERATOR MANUAL.A-UG }

Resolve...
Auto Resolve...
Auto Resolve All...
Close
Help
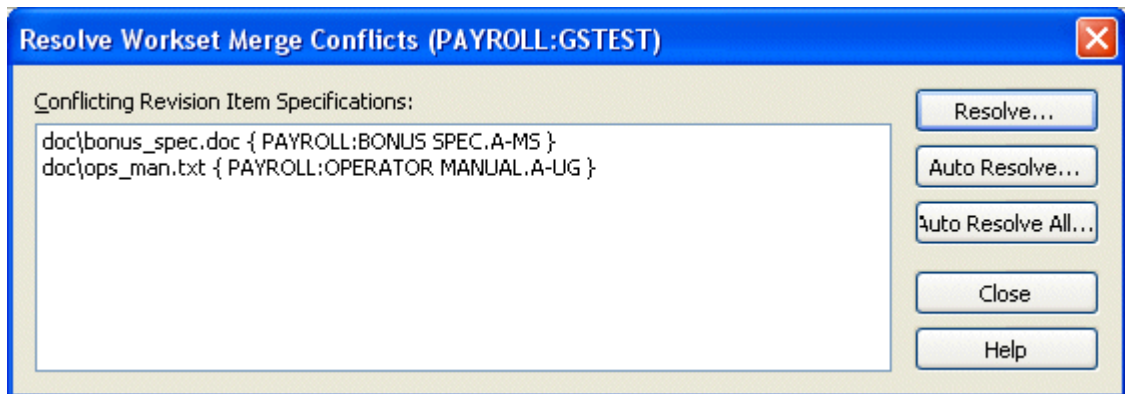
3 In the Resolve Workset Merge Conflicts dialog box, select the item specification and click Resolve.

Merge Conflicting Item Revisions

General | Options

Item Specification:

doc\bonus_spec.doc { PAYROLL:BONUS SPEC.A-MS };%

New Named Branch: New Revision:

Item Revisions:

PAYROLL:BONUS SPEC.A-MS;bug_2#1 { doc\bonus_spec.doc }
PAYROLL:BONUS SPEC.A-MS;1.2 { doc\bonus_spec.doc }

OK   Cancel   Help
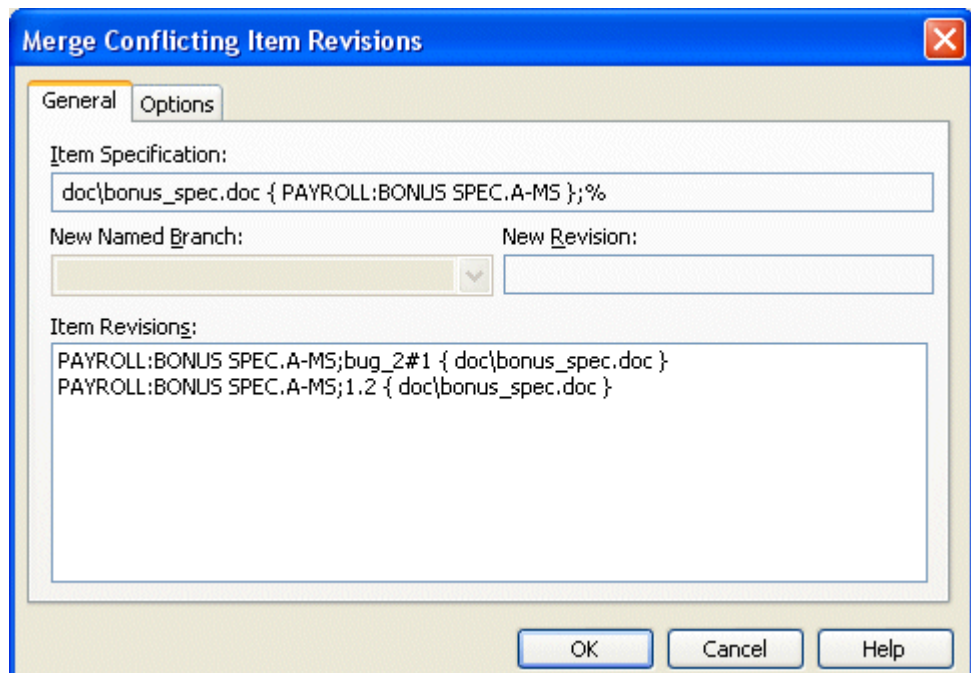
4   On the General tab of the Resolve Merge Conflicts dialog box, from the **Item Revisions** list select the item revisions you want to merge.

5   Optionally, select a New Named Branch, and type a New Revision value, if you want to override the default values.

6   Click the Options tab and do the following if required:

- For **Change Document ID**, type the name of the related change document, or click the browse button: … and use the Find dialog box to find it.

- From the **Status** list select a status.

- Enter a comment in the **Reason for Item Merge** field.

7   Click the Attributes tab, and type or select values.

Attributes in bold are required. Attributes in italics cannot be modified.

8   Click OK. The Serena ChangeMan Merge Tool opens. Resolve all the conflicting lines between the files. Follow the instructions in the online help or see "Comparing and Merging Files".

9   When you have completed the merge, close the Serena ChangeMan Merge Tool. You will be returned to the Resolve Workset Merge Conflicts dialog box.

10   Repeat steps 3–9 for each item in the **Conflicting Revision Item Specifications** list.

To automatically resolve item revision conflicts:

1   In a Workset containing conflicting item revisions, select the top-level folder.

2   Select Workset | Resolve.

Resolve Workset Merge Conflicts (PAYROLL:GSTEST)

Conflicting Revision Item Specifications:

doc\bonus_spec.doc { PAYROLL:BONUS SPEC.A-MS }
doc\ops_man.txt { PAYROLL:OPERATOR MANUAL.A-UG }

Resolve...

Auto Resolve...

Auto Resolve All...

Close

Help

3   In the Resolve Workset Merge Conflicts dialog box, do one of the following:

- ■ To automatically resolve one of the conflicting items, select the item specification and click Auto Resolve.

- ■ To automatically resolve all of the conflicting items in the list, click Auto Resolve All. If there are any item conflicts that Dimensions cannot resolve automatically, the Serena ChangeMan Merge Tool opens for those items enabling you to resolve the conflict manually, in which case follow steps 5 and 6 for each of these items.

4   If Dimensions is able to automatically resolve the conflict, the item will disappear from the **Conflicting Revision Item Specifications** list.

5   If the conflict cannot be resolved automatically, the Serena ChangeMan Merge Tool opens for you to resolve the conflict manually, in which case, do the following:

a   Resolve all the conflicting lines between the files, follow the instructions in the online help or see "Comparing and Merging Files".

b   When you have completed the merge, close the Serena ChangeMan Merge Tool. You will be returned to the

Resolve Workset Merge Conflicts dialog box and the item will have disappeared from the **Conflicting Revision Item Specifications** list.

6 Repeat step 3 to 5 for each item in the **Conflicting Revision Item Specifications**.

Viewing Workset History

Purpose   View the update history of a workset.

Permissions   No permissions required.

Desktop client   **To view workset history:**

1 Select a workset.

2 Select Workset | History.
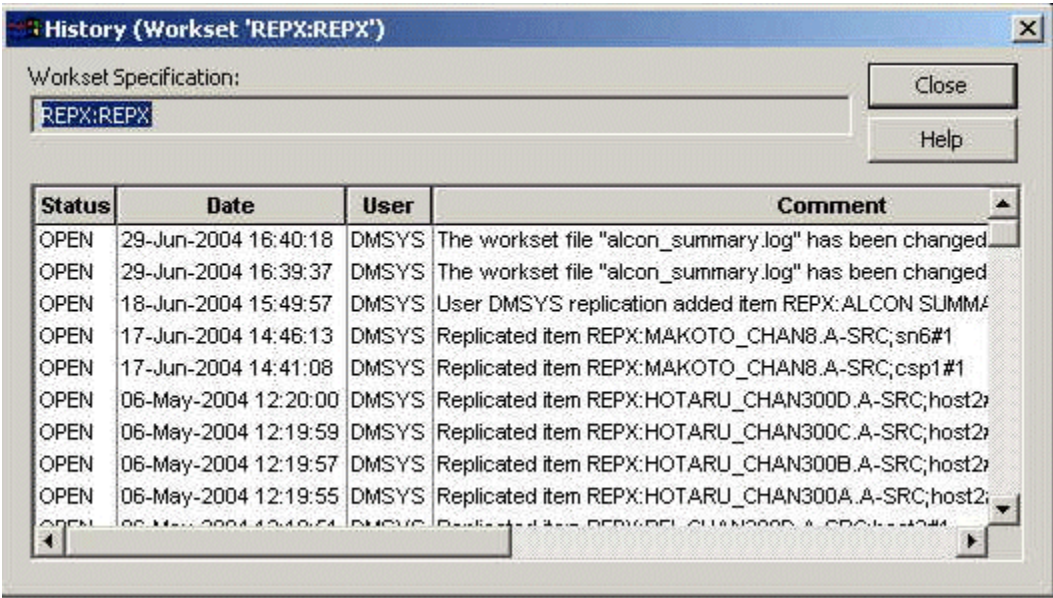
3 Click Close.

Displaying a Workset Pedigree

Purpose   View a workset pedigree when you want to see the parent
                 workset, and any worksets or baselines created from it.

Permissions   No permissions required.

Desktop client   **To display a workset pedigree:**

    1   In a Workset tree, select the top level folder.

    2   Select Workset | Pedigree.

Filtering Worksets

Purpose   Filter worksets to limit the list of worksets in the Manage
                 Worksets dialog box to the ones you want to view.

Permission   No permissions required.

Web client

To filter worksets:

1 On the Items tab, or the Pending tab with items selected, click Manage Worksets:
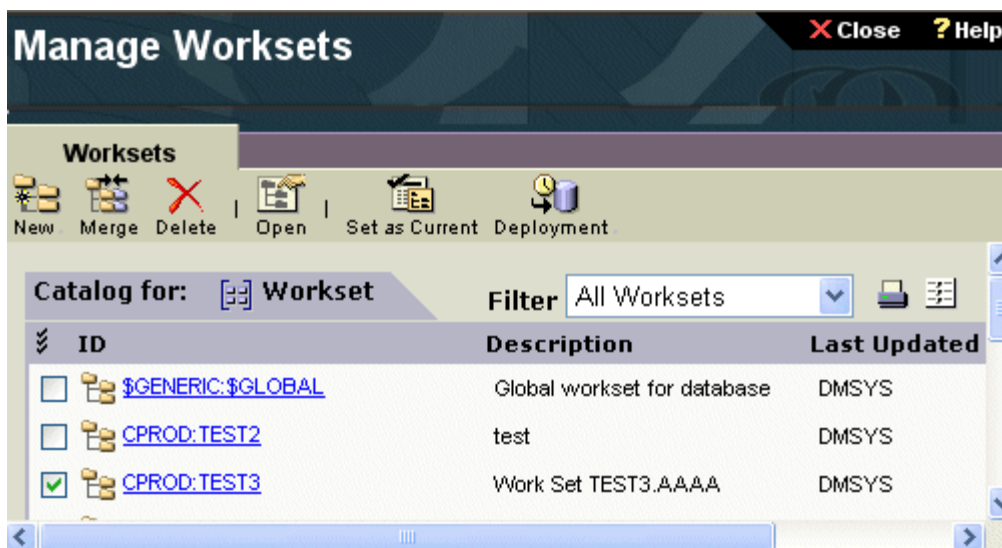
2 In the Manage Worksets dialog box, in the **Filter** list, do one of the following:

- To show all worksets, select **All Worksets.**

- To show only worksets that you updated last, select **Last Updated by Me**.

- To use a filter you previously defined, select the filter.

To create a filter:

1   In the Manage Worksets dialog box, from the **Filter** list, select New Filter.

2   For **Filter Name**, type a name for the filter.

3   Type or select filtering values in the other fields.

4   Click the OK button.

To edit a filter:

1   In the Manage Worksets dialog box, from the **Filter** list, select the filter that you want to edit.

2   From the **Filter** list, select **Edit Current Filter**.

3 To create a new filter based on the current filter, for **Filter Name,** type a new name.

4 Edit, select or type filtering values.

5 Click the OK button.

To delete a filter:

1 In the Manage Worksets dialog box, from the **Filters** list, select the filter to delete.

2 From the **Filter** list, select **Delete Current Filter**.

9   Managing Baselines

In this Chapter

About Baselines

At product development milestones, you can capture and record some or all of the items in a design part or a workset by saving them as a *baseline*. A baseline is a snapshot of a design part or a workset at a particular time. Baselines ensure that the design parts and items included in the baseline can be reliably recreated in the future. For example, create a baseline before starting a maintenance cycle or assigning further development activities.

There are three types of baselines:

■ **Design:** Use a design baseline to compare two baselines to see how the product has developed during the period the design baselines were created.

■ **Release:** Create a release baseline to define and build a test or release configuration of the product.

■ **Archive:** An archive baseline is a special release baseline that you use in conjunction with the Archive and Retrieval Tool.

For more information, see "About Baseline Categories" on page 295.

Baseline Types and Templates

A *baseline type* defines the attributes and lifecycle of the baseline.

A *baseline template* is a set of rules that determine which items to include or exclude in a baseline, either based on the item type, revision, status, and relationships, or alternatively based on a group of change documents to which items are related.

Baseline types and templates are defined in the Dimensions Administration Console. For more information, see the *Process Modeling User's Guide*.

About Baseline Categories

Dimensions provides three categories of baseline: design, release and archive.

Design Baselines

A design baseline represents the current product design structure, or a selected part of it, within the scope of the current workset or design part, including all the revisions for each item.

A design baseline does not use a baseline template.

Design baselines provide managers with audit capabilities. You can compare two baselines to see how the product workset has developed during the period the baselines were created.

Developers can continue to modify items included in a design baseline.

Dimensions includes the following in a design baseline:

■   The design part defined in the workset and all its descendent design parts, even if they are suspended.

■   The part change status (PCS) of the design part.

■   All item revisions that are either owned or used by any of the design parts.

■   The current status of each item.

A design baseline includes all the design parts and item revisions, even if they are suspended or checked out.

Release Baselines

A release baseline represents a snapshot of a design part or a workset at a particular time. A release baseline uses a baseline

296 Chapter 9 Managing Baselines

template that selects a single version of an item type that matches the criteria in the template. For example, you can create a release baseline that includes the following:

■   All EXE (executable) item types that are at the RELEASED state.

■   Any OBJ (object) and SRC (source) item types that are used to build the EXEs.

These rules define a baseline template. For more information, see "Baseline Types and Templates" on page 294.

Create a release baseline to define and build a test, or release, of your product.

Dimensions includes the following in a release baseline:

■   The design part defined in the workset and all its descendent design parts, even if they are suspended.

■   The part change status (PCS) of each design part.

■   All item revisions that are either owned or used by any of the design parts, restricted by the baseline template.

■   The current status of each item.

When you create a release baseline, Dimensions locks the design parts and items. You cannot delete or edit those revisions unless the release baselines containing them are deleted. However, you can action an item revision that is included in a release baseline. You can also create a new revision of an item.

You can revise a release baseline or merge two release baselines. For more information, see "About Revised and Merged Baselines" on page 317.

Archive Baselines

An archive baseline is a restricted variant of a release baseline that uses a baseline template that includes all of the revisions of the item types.

You can use the resulting baseline to preserve the product at a milestone using Dimensions ART. You cannot use an archive baseline to revise baselines, merge baselines, or for any configuration build or release purposes.

For more information on Dimensions ART, see the *Distributed Development Guide*.

About Baseline Lifecycles

Baselines have lifecycles that are determined by the baseline type. Each baseline type can have a different lifecycle. For more information, see "About the Process Model and Lifecycles" on page 36.

The Product Manager uses the Administration Console to define the lifecycle and the roles that move the baseline from one state to another. Roles are assigned to Dimensions users so they can action the baseline to each state in the lifecycle.

An example of a typical baseline lifecycle is shown in the following diagram.
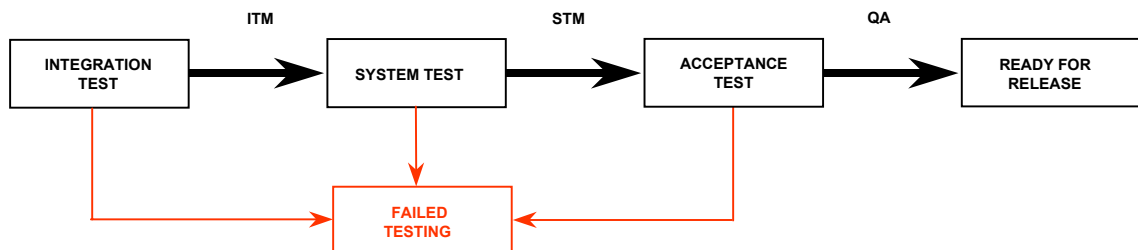
Users with the appropriate roles can action the baseline along the lifecycle. With each completed action, an e-mail message is sent to the user with the next role in the lifecycle and the baseline is added to the user's Pending Baselines list. Product Managers can action a baseline to any lifecycle state from any state in the lifecycle.

About Baseline Relationships

A baseline can have the following relationships with other Dimensions objects.

■ **Items.** The baseline contains a list of item revisions and their status at the time of the revision. Items can be in more than one baseline.

■ **Design parts.** The baseline contains a list of the design parts and their status in the baseline.

■ **Releases and customers.** A baseline can be used as the basis for a release when it is released to an external or internal customer. The release may also be related to specific customers to record who the release went to.

■ **Worksets.** The baseline has a relationship to the workset from which it was created.

■ **Change documents.** A baseline can have an *Affected*, *In Response to,* or *Info* relationship to one or more change documents.

■ **Baselines.** A release baseline has relationships to the baselines that were used to create it during a merge operation.

About Working with Baselines

The following figure shows a typical workflow when working with a baseline.

```
┌─────────────┐
│   DEFINE    │      Specify the types and preferred status of
│  BASELINE   │      items to be included in a release baseline
│  TEMPLATE   │
└─────────────┘
       │
┌─────────────┐
│   CREATE    │      Capture all, or part, of the details of
│  BASELINE   │      the current product design structure
└─────────────┘
       │
┌─────────────┐
│   ACTION    │      Progress the baseline through its
│  BASELINE   │      lifecycle
└─────────────┘
       │
┌─────────────┐
│   REPORT    │      List the details of design parts and
│  BASELINE   │      items captured by the baseline
└─────────────┘
```
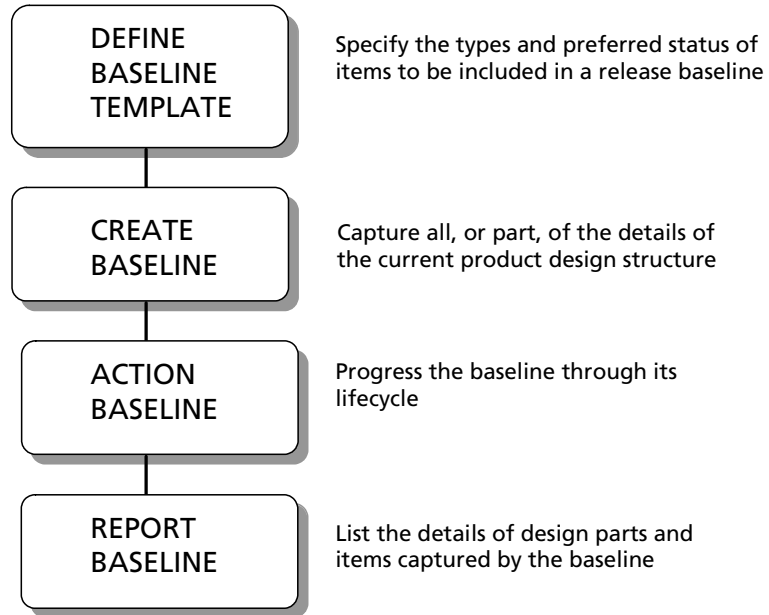
NOTE The Product Manager defines the baseline template in the Administration Console. For more information, see the *Process Modeling User's Guide*.

For more information on reports, see the *Reports Guide*.

Web client   In the web client, you can do the following:

■ **View items:** View the items included in a baseline.

■ **Action baselines:** Move baselines from one state in the lifecycle to the next state.

■ **Edit attributes:** Change a baseline's attributes.

- ■ **Create a baseline:** Create a new baseline from a workset.

- ■ **Create revised baselines and create merged baselines:** Use existing release baselines to create revised and merged baselines.

- ■ **Delete a baseline:** Delete a baseline that was created prematurely or is no longer needed.

Desktop client   In the desktop client, you can do the following:

- ■ **View items:** View the items included in a baseline.

- ■ **Show users and roles:** View the role assignments for a baseline and the users who have the baseline in their Pending Lists.

- ■ **View history and pedigree:** View the action and update history of a baseline and see the objects related to the baseline.

- ■ **Action baselines:** Move baselines from one state in the lifecycle to the next state. Move the items in a baseline from one state to another.

- ■ **Edit attributes:** Change a baseline's attributes.

- ■ **Create a baseline:** Create a new baseline from a workset or a design part.

- ■ **Create revised baselines and create merged baselines:** Use existing release baselines to create revised and merged baselines.

- ■ **Delete a baseline:** Delete a baseline that was created prematurely or is no longer needed.

Selecting a Baseline

Purpose   Perform an operation on a baseline.

Permissions   No permissions required.

Web client   **To select a baseline:**

    1 Do one of the following:

       ■ From the Pending tab, select the Baseline icon:

       ■ From the Baselines tab, select the Catalog icon or a design part folder.

    2 In the content area, do one of the following:

       ■ **To select a baseline**, click its check box:

       ■ **To select all baselines in the list**, click the Select All icon in the column heading:

Desktop client   **To select a baseline:**

    1 In the Display Bar, click Baseline/Release.

    2 Do one of the following:

       ■ Click **Pending Baselines**:

       If the Open Pending Objects dialog box opens, select a user and click OK.

       ■ Click **Baseline Catalog**:

       In the Select Baselines to Open dialog, select a product, select one or more baselines, and click **Open**. To open all baselines, click **Open All**.

    3 In the Baselines window, do one of the following:

       ■ **To select a single baseline**, click the button next to the baseline, or click anywhere in the row containing the baseline.

- **To select multiple baseline**, Ctrl+click each baseline.

- **To select a range of baselines**, click the first baseline in the range, then SHIFT+click the last baseline.

- **To select all baselines in the list**, click the blank column heading, or click anywhere in the content window and type Ctrl+A.
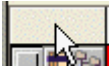
Viewing Items in a Baseline

Purpose   View the items included in a baseline.

Permissions   No permissions required.

Web client   **To view items in a baseline:**

   1 Do one of the following:

- Select a baseline and click Open.

- Click the baseline name.

   2 In the Open Baseline dialog box, click the Items tab.

Desktop client   **To view items in a baseline:**

Select a baseline. The contents of the baseline are displayed in the Items window.

NOTE If the Items window is not currently displayed, select View | Items, or click the View Items button: on the View toolbar.

Showing Users and Roles for a Baseline

Purpose   View the role assignments for a baseline and the users with the
                   baseline in their Pending Lists.

Permission   No permissions required.

Desktop client   **To show users and roles:**

1   Select a baseline.

2   Select Baseline | Show Users/Roles.
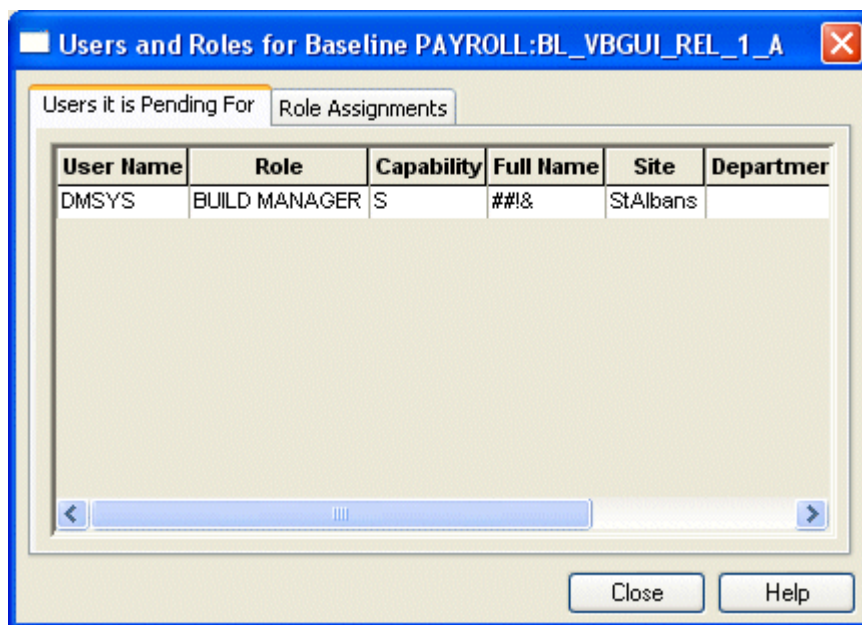
3   To view a list of users that have the baseline in their Pending
    Lists, in the Users and Roles for Baseline dialog box, click the
    Users It Is Pending For tab.

4   To view the roles that have a function in the baseline's
    lifecycle, click the Role Assignments tab.

5   Click the Close button.

Viewing Baseline History

Purpose	View the action and update history of a baseline.
Permissions	No permissions required.
Desktop client	**To view baseline history:**

   1 Select a baseline.

   2 Select Baseline | History.
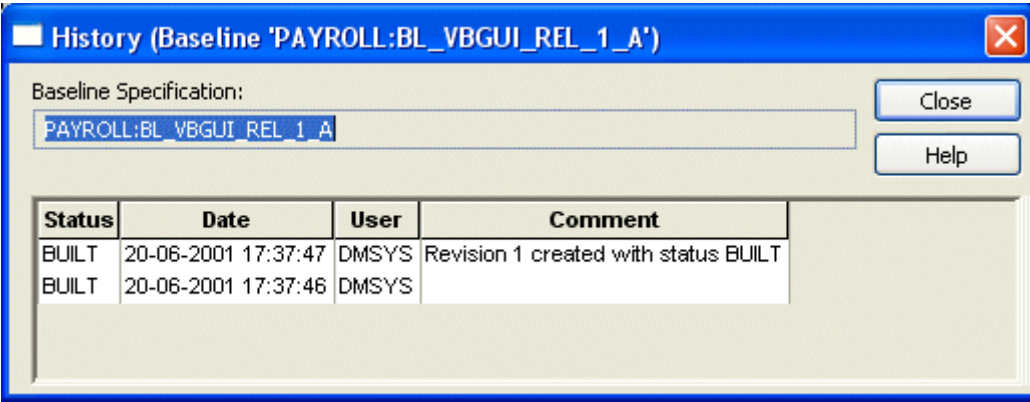
   3 Click Close.

Viewing Baseline Pedigree

Purpose	View the objects related to a baseline. These objects include the parent workset, parent baselines, releases, and the customers created for these releases.
Permissions	No special permissions are required.
Desktop client	**To view baseline pedigree:**

   1 Select the baseline.

2   Select Baseline | Pedigree.

You see the Baseline Pedigree window that contains all the objects related to the baseline. Objects use the following icons:

Baseline

Release

Workset

Customer

For more information on the Pedigree window toolbar, see "About the Pedigree Window" on page 114.

Actioning a Baseline

Purpose   Use this operation to move the baseline from one lifecycle state to the next lifecycle state.

Permissions   The baseline must be in your Pending List or you must be the Product Manager.

To action a baseline from a lifecycle state to another lifecycle state, you must be the Product Manager.

Web client   **To action a baseline:**

    1 Select a baseline.

    2 Click the Action button:

3 In the Action dialog box, select the next lifecycle state.

4 For **Reason for action,** optionally type a comment.

5 Click the Attributes tab, and type or select values.

6 Click the OK button.

Desktop client   **To action a baseline:**

    1 Select the baseline.

2 Select Baseline | Action | Baseline.

3 On the General tab of the Action Baseline dialog box, verify the values.

4 If necessary, from the **New Status** list, select the next lifecycle state.

5 For **Action description,** optionally type a comment.

6 Click the Attributes tab, and type or select values.

7 Click the OK button.
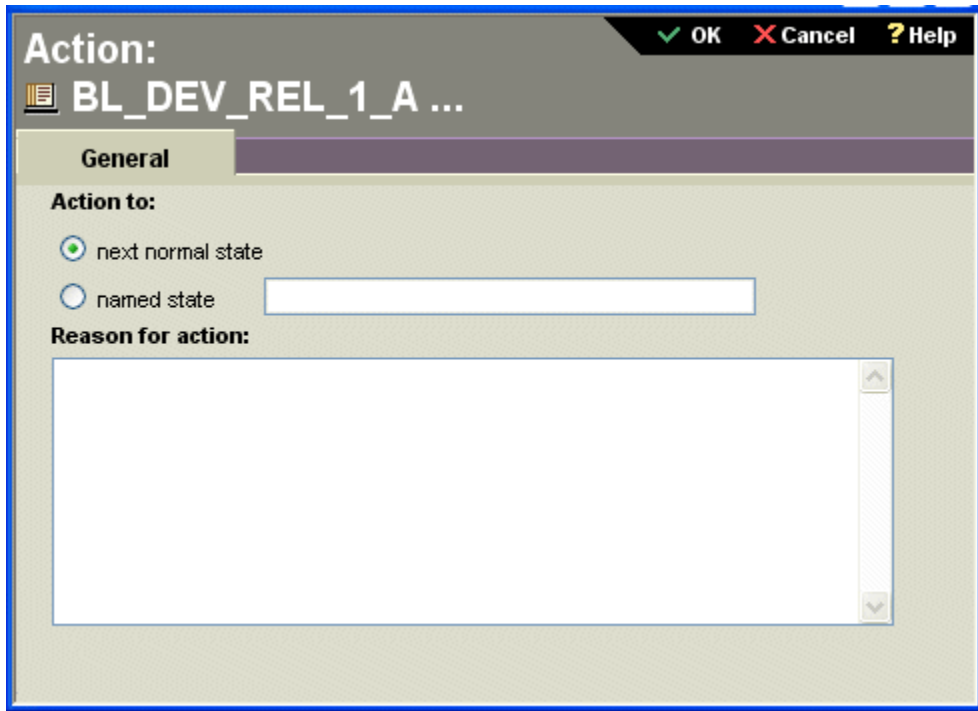
Actioning Multiple Baselines

Web client   **To action multiple baselines:**

1 Select one or more baselines.

2 Click the Action button:

Action:	✓ OK ✕ Cancel ? Help

BL_DEV_REL_1_A ...

General

Action to:

⦿ next normal state

◯ named state

Reason for action:

3 In the Action dialog box, do one of the following:

- Select **Next Normal State**.

- Select **Named State,** and type the name of the next lifecycle state.

4 For **Reason for action,** optionally type a comment.

5 Click the OK button.

Desktop client   **To action multiple baselines:**

1 Select two or more baselines.

2   Select Baseline | Action | Baseline.
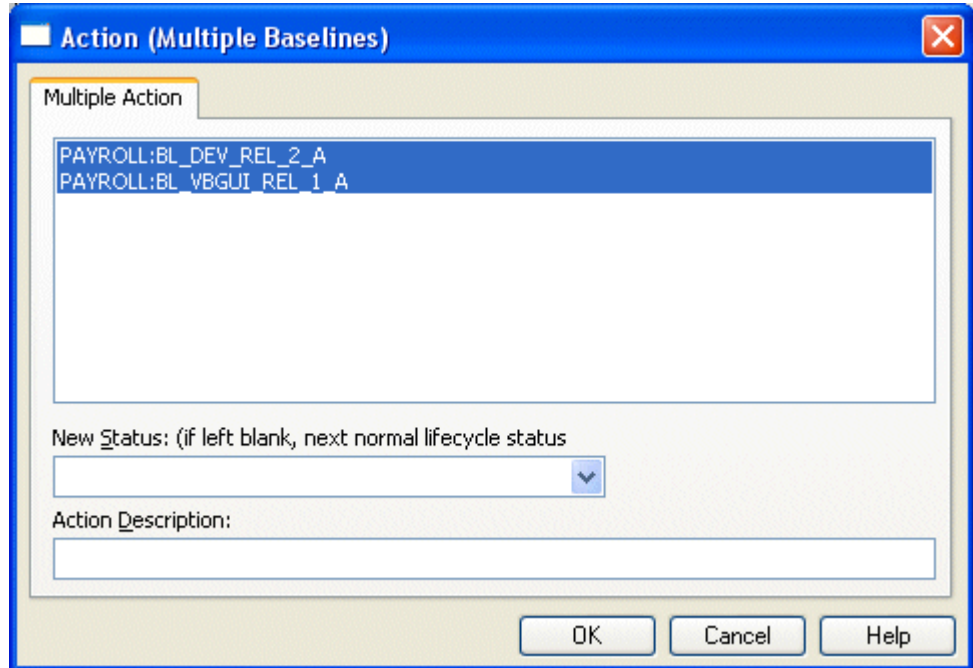
3   In the Action Multiple Baselines dialog box, from the **New Status** list, select the lifecycle state to which you want to action the selected baselines. If you leave this field blank, the baselines are actioned to the next normal lifecycle status.

NOTE Lifecycles are defined with respect to the baseline's type. If you have selected baselines of different types, you must ensure that the lifecycle state you specify is common to all these lifecycles.

---

4   For **Action description,** optionally type a comment.

5   Click the OK button.

Actioning Baseline Items

Purpose   Use this operation to action items in a baseline to a new lifecycle
                 state.

Permissions   You must have the role to action the items or be the Product
                 Manager.

Desktop client   **To action baseline items:**

1   Select the baseline.

2   Select Baseline | Action | Items in Baseline.

```
Action Items (Baseline BL_VBGUI_REL_1_A)                          ✕

Baseline Specification:                                         ┌──────────┐
┌────────────────────────────────────────────────────┐        │    OK    │
│ PAYROLL:BL_VBGUI_REL_1_A                             │        └──────────┘
└────────────────────────────────────────────────────┘        ┌──────────┐
Item Specification Filter:                                     │  Cancel  │
┌────────────────────────────────────────────────────┐        └──────────┘
│ %                                                    │        ┌──────────┐
└────────────────────────────────────────────────────┘        │   Help   │
New Status: (if left blank, next normal lifecycle status       └──────────┘
┌────────────────────────────────────────────┬───┐
│                                            │ ▾ │
└────────────────────────────────────────────┴───┘
Action Description:
┌────────────────────────────────────────────────────────────────┐
│                                                                  │
└────────────────────────────────────────────────────────────────┘
```
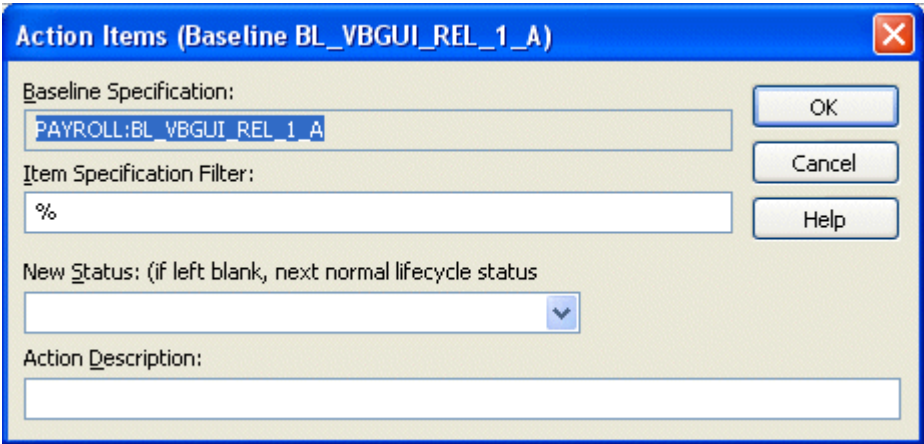
3   In the Action Baseline Items dialog box, change the **Item
    Specification Filter,** if necessary. You can use the following
    wildcards in this field:

- Use an underscore (_) to match exactly one character. For
  example, d_g matches dog or dig.

- Use an asterisk (*) or percent sign (%) to match any number
  of characters. For example, d*g matches dog or drag or
  dreaming.

4   From the **New Status** list, select the next status for the items.

NOTE If you are not the Product Manager, the new status must be reached from the current status by a single normal lifecycle transition. If you leave the **New Status** field blank, Dimensions automatically selects the next normal lifecycle status.

---

5   For **Action description,** optionally type a comment.

6   Click the OK button.

Editing Baseline Attributes

Purpose
: Use this procedure to change one or more baseline attributes. If you select more than one baseline, they must all be in the same product and have the same baseline type. For more information, see "Baseline Types and Templates" on page 294.

Permissions
: The attribute update rules defined by the Product Manager determine which attributes you can edit.

Web client
: **To edit baseline attributes:**

1   Do one of the following:

■   Select a baseline and click Open.

■   Click the baseline name.

2   In the Open Baseline dialog box, click the Attributes tab.

3   Change the attribute values.

4   Click the Save button.

Desktop client
: **To edit baseline attributes:**

1   Select one or more baselines.

    2   Select Baseline | Edit Attributes.

    3   If you selected multiple baselines, in the Edit Baseline Attributes dialog box, click the Attribute tab.

    4   Change the attribute values.

    5   Click the OK button.

Creating a Baseline

Purpose

Use this operation to mark a milestone and create a snapshot of a workset.
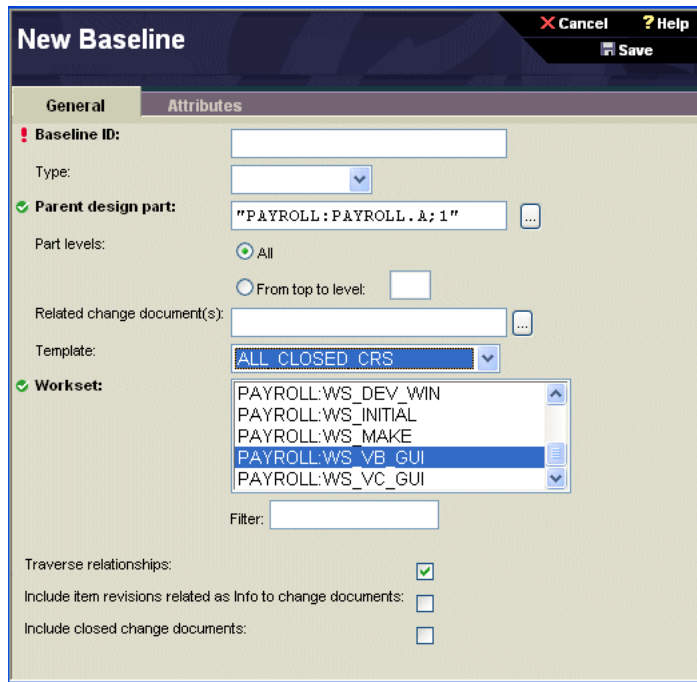
CAUTION! Do not create more than one baseline at a time. If you create multiple baselines simultaneously you may corrupt the baselines and they will not contain the correct data.

Permissions

You must have a role that enables you to action the top-level design part from its initial lifecycle state to a new state. If the Product Manager has assigned the $ORIGINATOR role to the first transition in the lifecycle for this baseline type, any Dimensions user can create a baseline, provided they have a role that authorizes them to access the product.

Web client   **To create a new baseline:**

1 From the Baseline tab, or the Pending tab with Baselines selected, click the New button: and choose Based on Workset.

2 In the New Baseline dialog box, on the General tab, verify that any values that have been pre-populated are correct.

3 For **Baseline ID**, type a name or label for the baseline. This name must be unique within the product.

4 From the **Type** list, select a baseline type. The values in this list are set up in the process model.

5 For **Part Levels**, do one of the following:

   ■ To include items from all design parts below the parent, select **All**.

- To specify the number of levels in the design part hierarchy from which items will be included, select **From Top to Level** and type an integer value.

6 In **Related Change Documents**, optionally enter any change documents you want to relate to this baseline as *In Response to*.

7 If you are creating a design baseline, skip to step 9.

 If you are creating a release or archive baseline, from the **Template** list, select a template.

8 If the workset you want to base the baseline on is different from the one selected, select it in the Worksets list.

9 Optionally, enter a filter string to filter the item revisions included in the baseline.

10 If the template is a change document baseline template, do the following:

- If you do not want to include item revisions for change documents related to the change documents selected by the template, deselect **Traverse Relationships**.

- If you want to include item revisions related as Info, select **Include item revisions related as Info to change documents.**

- If you want to include items related to closed change documents, select **Include closed change documents**.

11 Click the Attributes tab, and complete any required fields.

12 Click the Save button.

NOTE When you create a baseline, Dimensions locks the workset from which it is built so that no user can make changes.

Desktop client   **To create a new baseline:**

  1 Do one of the following:

  ■ Select File | New | Baseline.

  ■ Right-click a top-level design part, and choose New
    Baseline. For more information, see "Selecting a Design
    Part" on page 183.
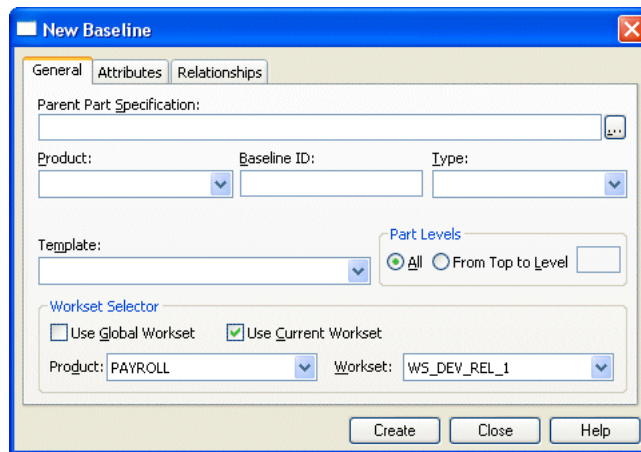
  2 In the New Baseline dialog box, on the General tab, verify
    that the values are correct.

  3 For **Parent Part Specification**, type a part specification, or
    click the browse button ... and use the Find dialog box. If
    you are creating the baseline from a design part, this field is
    pre-populated.

  4 From the **Product** list, select a product with which the
    baseline will be associated. If you are creating the baseline
    from a design part, this field is pre-populated.

  5 For **Baseline ID**, type a name or label for the baseline. This
    name must be unique within the product.

  6 From the **Type** list, select a baseline type. The values in this
    list are set up in the process model.

7 If you are creating a design baseline, skip to step 8.

If you are creating a release or archive baseline, from the **Template** list, select a template.

8 For **Part Levels**, do one of the following:

■ To include items from all design parts below the parent, select **All**.

■ To specify the number of levels in the design part hierarchy from which items will be included, select **From Top to Level** and type an integer value.

9 If the template is a change document baseline template, click the Relationships tab and do the following:

■ If you do not want to include item revisions for change documents related to the change documents selected by the template, deselect **Traverse Relationships**.

■ If you want to include items related to closed change documents, select **Include closed change documents**.

■ If you want to include item revisions related as Info, select **Include item revisions related as Info to change documents.**

10 Optionally, on the Relationships tab, enter any change documents you want to relate.

11 Click the Attributes tab, and complete any required fields.

12 Click the Create button.

NOTE When you create a baseline, Dimensions locks the workset from which it is built so that no user can make changes.

Renaming a Baseline

Purpose   Rename a baseline when you want to change the baseline ID.

You must be the baseline creator or the Product Manager.

Web client   **To rename a baseline:**

1   Do one of the following:

■   Select a baseline and click Open.

■   Click the baseline name.

2   In the Open Baseline dialog box, enter the new baseline ID.

3   Click the Save button.

Desktop client   **To rename a baseline:**

1   Select the Baseline.

2   Select Baseline | Rename.

3   For **New Baseline ID**, type the new baseline identifier.

4   Click the OK button.

About Revised and Merged Baselines

You can create a revised release baseline or merge two release baselines into one baseline.

IMPORTANT! You must use a release baseline to create a revised or merged baseline. You cannot use a design baseline or an archive baseline. For more information, see "About Baseline Categories" on page 295.

Revised Baselines

A revised baseline is created by applying change documents to a previous baseline. Applying the change document affects the original baseline based on the relationship of the item revision to the change document:

- Change documents with *Affected* relationships remove item revisions.

- Change documents with *Affected* and *In Response To* relationships replace item revisions.

- Change documents with *In Response To* relationships add item revisions.

When multiple revisions of the same item have the *In Response To* relationship to one or more change documents, the latest version by pedigree is selected.

If two or more item revisions are on different branches, Dimensions issues a warning and processing continues without changing the revision of that item in the baseline.

For example, if you create a new baseline for a maintenance release from the main development branch, it may contain unwanted features and untested code. However, if you revise a previous release baseline, the only changes introduced are those contained in the change documents included in the baseline.

Every revised baseline has only *one* revision of any item, so it can be used like any other release baseline, for example, to create a test or release configuration of the product.

You can also use a revised or merged baseline to create another revised baseline. Because the contents of this baseline are no longer determined directly by the rules of a baseline template, its template ID is REVISED.

Merged Baselines

A merged baseline is created by selecting a top level design part, and specifying two or more existing baselines from which item revisions are to be included. Each input baseline must be either a release baseline or an earlier merged or revised baseline. All the baselines must reference the same product that will be specified for the new baseline.

The baselines in the list are considered in turn in the order specified in that list; and each of the items in each baseline is checked and ignored if:

- it is not in the new baseline's workset or design part structure.

- any revision of the same item has already been added to the new baseline.

If these checks are passed, the item revision is added to the new baseline. This continues until all items in all the baselines in the list have been dealt with.

This processing rule means that, for any item in the merged baseline, the revision added will be the one found in the first baseline in the list that contains that item. Therefore, in order to obtain a merged baseline with satisfactory contents, you would normally list the input baselines by creation date, in ascending order (the most recent baselines first and the oldest last).

A merged baseline typically has the same scope, or list of design parts, as the baselines used to create it. However, if you select a design part that is different from the source baselines, items that are in the source baselines that are not owned by the design part of the merged baseline are not included in the new baseline.

Every merged baseline has no more than one revision of any item, so it can be used like any other release baseline. For example, to create a test or release configuration of the product.

You can also use a revised or merged baseline to create another merged baseline. Because the contents of such a baseline are no longer determined directly by the rules of a baseline template, its template ID is MERGED.

Revising a Baseline

Purpose

Use this operation to create a new baseline by revising an existing baseline. The revised baseline includes or excludes the changes made to items in response to a set of change documents.

CAUTION! Do not create more than one baseline at a time. If you create multiple baselines simultaneously you may corrupt the baselines and they will not contain the correct data.

Permissions

You must have a role that enables you to action the top-level design part from its initial lifecycle state to a new state. If the Product Manager has assigned the $ORIGINATOR role to the first transition in the lifecycle for this baseline type, any Dimensions user can create a baseline, provided they have a role that authorizes them to access the product.

Restrictions

■   When multiple revisions of the same item are In Response To one or more change documents, the latest revision by pedigree will be selected. If two or more item revisions are on different branches, creating a revised baseline causes Dimensions to issue a warning and continue processing without changing the revision of that item in the baseline.

■   The maximum number of change documents that can be specified when creating a revised baseline is 496.

Web client

To create a revised baseline:

1   Select the baseline on which you want to base the revised baseline.

2 Click the New button: and choose Revised Baseline.

3 For **New Baseline ID**, type a name or label for the baseline. This name must be unique within the product.

4 From the **Type** list, select a baseline type. The values in the list are set up in the process model.

5 For **Change Documents to Update** field, list the change documents related to item revisions that you want to add to the baseline. The item revisions must have an In Response To relationship to the change documents.

  To list the change documents, do one of the following:

  ■ Type, or paste, one or more change document IDs separated by a comma. For example, `PAYROLL_CR_2`, `PAYROLL_PR_3`

  ■ Click Browse and search for change documents using the Select Change Document wizard.

6 For **Change Documents to Remove,** list the change documents related to item revisions that you want to remove

from the baseline. The item revisions must have an Affected relationship to the change documents.

List the documents as described in the previous step.

NOTE You must have at least one change document in either the **Change Documents to Update Baseline With** field or the **Change Documents to Remove From Baseline** field.

---

7 Select the **Traverse Relationships** check box to search for item revisions included in change documents related to the listed change documents.

8 From the **Workset** list, choose the workset from which you want to include item revisions.

   To modify the worksets shown in the list, enter a text string in the **Filter** field. Only worksets containing that string will be listed. To display all worksets, clear the field.

9 Click the Attributes tab and specify user-defined attributes that have been set up in the process model for the baseline type.

10 Click the Save button.

11 Check your Dimensions server e-mail for any errors. The following errors are possible:

   ■ If the change documents in the **Change Documents to Update Baseline With** list include more than one revision of an item, Dimensions reports an error and does not create the revised baseline.

   ■ If any revision to be deleted is the same as one that is to be added or substituted, Dimensions reports an error and does not create the revised baseline.

■ If on completion of the processing there is no change to the original baseline, Dimensions reports an error and deletes the new baseline.

Desktop client   **To create a revised baseline:**

1 Select the baseline you want to revise.

2 Select Baseline | New | Based on Revised.
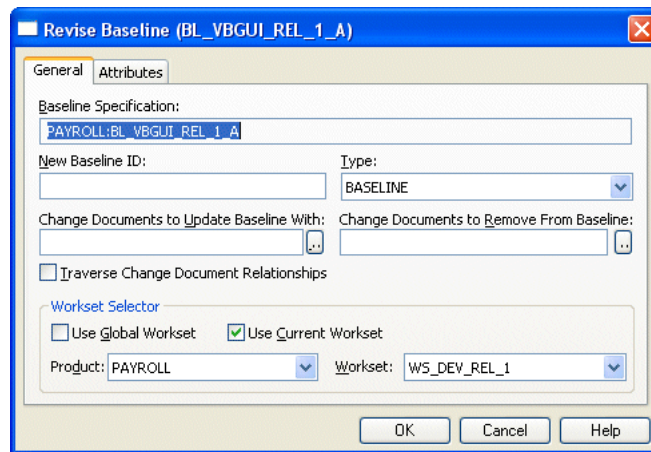
3 In the Revise Baseline dialog box, verify that the values are correct.

4 For **New Baseline ID**, type a name for the revised baseline. This name must be unique within the product.

5 For **Change Documents to Update Baseline With**, list the change documents related to item revisions you want to add to the baseline. The item revisions must have an In Response To relationship to the change documents.

To list the change documents, do one of the following:

■ Type, or paste, one or more change document IDs separated by a comma. For example, PAYROLL_CR_2, PAYROLL_PR_3.

- Click the Browse button and search for change documents using the Find Change Documents dialog box.

6 In the **Change Documents to Remove From Baseline** field, list the change documents related to item revisions that you want to remove from the baseline. The item revisions must have an Affected relationship to the change documents.

   List the documents as described in the previous step.

NOTE You must have at least one change document in either the **Change Documents to Update Baseline With** field or the **Change Documents to Remove From Baseline** field.

---

7 Select the **Traverse Change Document Relationships** check box to search for item revisions included in change documents related to the listed change documents.

8 Click the Attributes tab, and specify user-defined attributes that have been set up in the process model for the baseline type.

9 Click the OK button.

10 Check your Dimensions server e-mail for any errors. The following errors are possible:

   - If the change documents in the **Change Documents to Update Baseline With** list include more than one revision of an item, Dimensions reports an error and does not create the revised baseline.

   - If any revision to be deleted is the same as one that is to be added or substituted, Dimensions reports an error and does not create the revised baseline.

   - If on completion of the processing there is no change to the original baseline, Dimensions reports an error and deletes the new baseline.

Merging Baselines

Purpose   Use this operation to merge two or more baselines into a new baseline.

Permissions   You must have a role that enables you to action the top-level design part from its initial lifecycle state to a new state. If the Product Manager has assigned the $ORIGINATOR role to the first transition in the lifecycle for this baseline type, any Dimensions user can create a baseline, provided they have a role that authorizes them to access the product.

Web client   **To merge baselines:**

1 Select one or more baselines that you want to include in the merged baseline.

2 Click New: ▦ and choose Merged Baseline.
   New
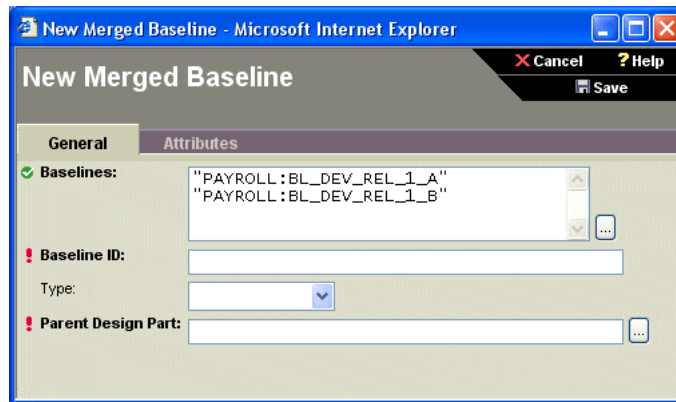
3 For **Baselines**, type any additional baselines you want to include, or click Browse and search for baselines using the Select Baseline wizard.

4 For **Baseline ID**, type a name or label for the baseline. This name must be unique within the product.

5 From the **Type** list, select a baseline type. The values in the list are set up in the process model.

6 For **Parent Design Part**, type the top-level design part, or click the Browse button and search for design parts using the Select Design Part wizard. The parent part specification has the following format:
   productID:*partID*.*variant*;*pcs*

7 Click the Attributes tab and specify user-defined attributes that have been set up in the process model for the baseline type.

8 Click the Save button.

9 Check your Dimensions server e-mail for any errors.

Desktop client   **To merge baselines:**

1 Select two or more baselines that you want to merge.

2 Select Baseline | New | Based on Merged.
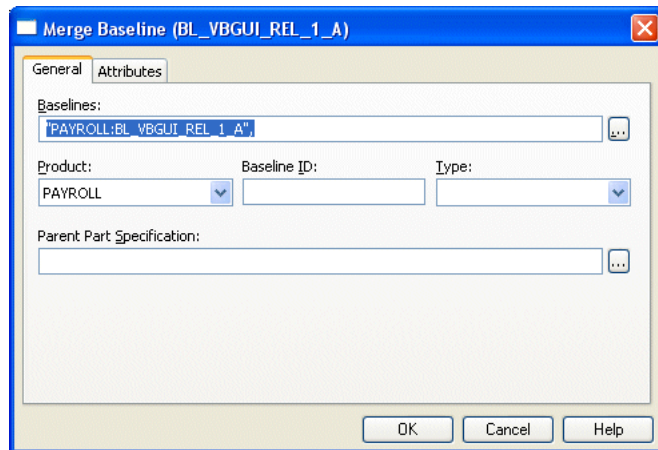
3 On the General tab of the Merge Baseline dialog box, verify that the values are correct.

4   For **Baseline ID**, type a name for the revised baseline. This name must be unique within the product.

5   From the **Type** list, select a baseline type. The values in the list are set up in the process model.

6   For **Parent Part Specification**, type the top-level design part, or click the Browse button and search for design parts using the Find dialog box. The parent part specification has the following format:

   productID:*partID.variant;pcs*

7   Click the Attributes tab, and specify user-defined attributes that have been set up in the process model for the baseline type.

8   Click the OK button.

9   Check your Dimensions server e-mail for any errors.

Deleting a Baseline

Purpose   Use this operation when a baseline is no longer required.

You cannot delete a baseline if it has been used to make a release, unless you delete the release first. For more information, see "Deleting a Release" on page 338.

You cannot delete a baseline if it has been used to create an archive unless you retrieve the archive first. For more information, see the *Distributed Development Guide*.

CAUTION! To delete multiple baseline at the same time, use a Dimensions command file—this guarantees that each baseline is deleted in turn.

Permissions   You must be the baseline creator or the Product Manager. If a
                 baseline has been actioned from its initial state, only the Product
                 Manager can delete the baseline.

Web client   **To delete a baseline:**

                 1 Select the baseline.

                 2 Click Delete:

                 3 In the Delete dialog box, verify that you have selected the
                        correct baseline, and click the OK button.

Desktop client   **To delete a baseline:**

                 1 Select the baseline.

                 2 Select Baseline | Delete.

                 3 In the Delete Baseline dialog box, verify that you have
                        selected the correct baseline, and click the OK button.

                 4 Check your Dimensions server e-mail for any error messages
                        resulting from this operation.

10 Managing Releases

In this Chapter

About Releases and Customers

A *release* is a snapshot of the design structure or a baseline that you can use, for example, to package and ship to a customer, or use in integration testing.

A *customer* is the recipient of one or more releases. You show this in Dimensions by relating a release to a customer or a customer to a release. Relating customers to releases is usually called forwarding, and unrelating them is called withdrawing.

When you create a release, Dimensions creates a directory external to the Dimensions database that includes copies of all the files from a product configuration, or those files that satisfy the criteria in the release template. To ensure that items within a release are compatible, they must first be included in a release baseline. For more information, see Chapter 9, "Managing Baselines."

There are two types of releases:

■ **Release:** a complete copy of a baseline. Dimensions copies all of the items in the baseline to the release directory, creating relative directories as necessary.

■ **Delta:** includes only the items that have changed since you created a previous release. Dimensions checks each item specification against the contents of the previous release. If there is an exact match, including the revision number, Dimensions skips the item.

Dimensions maintains a history of the items included in a release. It does not record the location of the release directory. Once Dimensions creates the copy of the configuration, it exercises no further control over the release directory or its contents.

About Release Templates

When you create a release, you can select a release template. A release template is a set of user-defined rules that do the following:

■ Select which parts of the product structure to include.

■ Select which item types to include.

■ Specify where to place the selected items in the release directory.

As a result, a release that uses a template may look completely different from the same release that does not use a template. The template can restrict which items to copy based on which design parts own the items, and also based on item type. The template can also override a workset directory structure.

You can use different release templates on the same baseline to create different releases, such as test configurations of subsystems.

You can reuse a release template:

■ On the same baseline to produce multiple versions of the release.

■ On a different baselines to create unique releases

■ On different products.

If you use a template to create a release, you cannot change or remove the template until you remove all releases using the template.

You create release templates in the Administration Console. For more information, see the *Process Modeling User's Guide*.

About Release Relationships

A release can have the following relationships with other Dimensions objects:

- **Items:** The release is related to the items that it includes. The items can be a subset of the items contained in the baseline.

- **Baselines:** The release has a relationship to the baseline from which it was created.

- **Customers:** The release can have a relationship to one or more customers. In Dimensions, relating customers to releases is referred to as forwarding, and unrelating them as withdrawing.

About Forwarding a Release to a Customer

Forwarding a release establishes a relationship between a release and a customer. You can use this relationship to keep track of which releases were sent to which customers.

You can forward a release to multiple customers or forward multiple releases to a customer. The process of forwarding a release is similar to relating any two other objects. For more information, see "Relating and Unrelating Objects" on page 108.

About Withdrawing a Release from a Customer

Withdrawing a release from a customer removes the relationship between a release and a customer. Withdraw a release when a customer no longer wants to use a release.

The process of withdrawing a release is similar to unrelating any two other objects. For more information, see "Relating and Unrelating Objects" on page 108 for the desktop client, and "Relating and Unrelating Objects" on page 76 for the web client.

# Selecting a Release

Purpose   Select a release so you can perform an operation it.

Permissions   No permissions required.

Web client   **To select a release:**

   1   On the Baselines tab, click the Manage Releases button:

Manage Releases
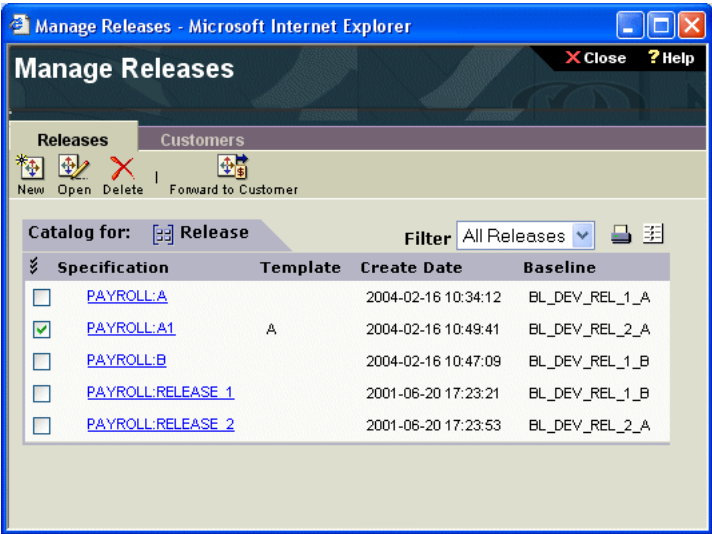
   2   On the Releases tab, do one of the following:

   ■   **To select a release**, click the check box next to it: ☑

■ **To select all releases in the list**, click the select all icon in the column heading: ⚡

Desktop client **To select a release:**

1 In the Display Bar, click Baseline/Release.

2 Click the Release Catalog icon:

3 In the Select Releases dialog box, select a product and one or more releases.

4 Do one of the following:

■ **To select a single release**, click the button ⬜➡🔳 next to the release, or click anywhere in the row.

■ **To select multiple releases**, Ctrl+click each release.

■ **To select a range of releases**, click the first release in the range, then SHIFT+click the last release.

■ **To select all releases in the list**, click the blank column heading

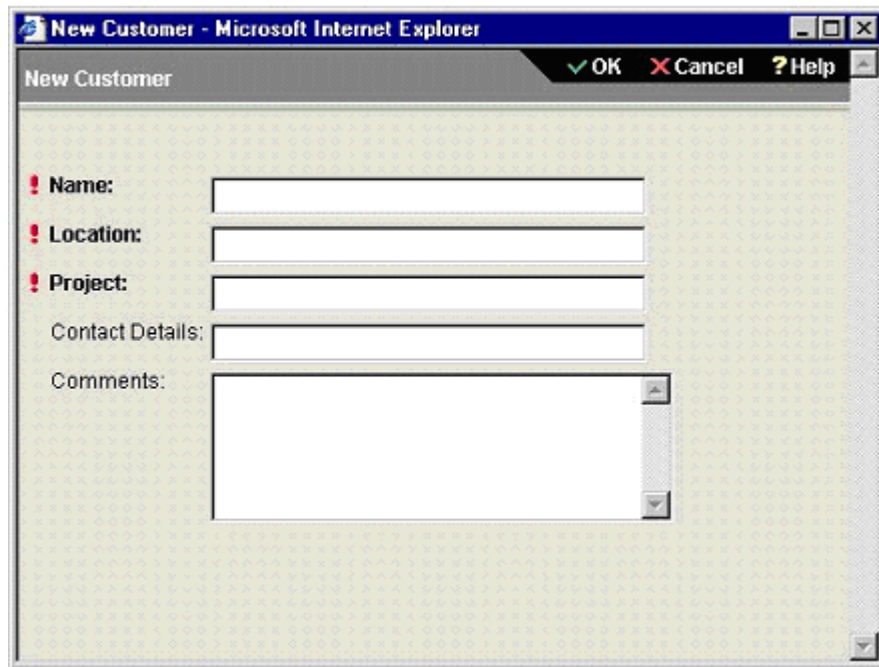

or click anywhere in the content window and type Ctrl+A.

Creating a Release

Purpose

Create a snapshot of a product configuration or a baseline that you can use, for example, to package and ship to a customer, or use in integration testing.

If you are creating a release on a z/OS mainframe node, Dimensions automatically creates the target data sets, and you do not have to pre-allocate them. However, it is worth noting the target location so that you know where the files are stored.

Permissions

You need permissions to get a copies of the items in the release. This usually means having at least one role on one or both of the following:

■   The top design part in the release's baseline, extending to all of the design parts below it.

■   The workset used when the release's baseline was created.

If you are going to create several releases of a particular product, it is simpler if you have a role for the product level design part. This gives you permissions for every item in the product.

If the baseline for the release includes items that do not belong to the product, you might need additional permissions.

Be sure that you have permissions to create the directories on the workstation or server where Dimensions will create the directories.

Web client

To create a release:

  1   On the Baselines tab, click the Manage Releases button:

2 On the Releases tab, click the New button:

3 For **Release ID**, type a name for the release. The name must be unique within the product. Dimensions does not record variants, versions, or revisions for a release, therefore make the name as specific as possible. For example:

```
Release 2.1.0.4 for USA
```

4 If applicable, from the **Release Template ID** list, select a template. The Product Manager creates release templates in the Administration Console.

5 For **Description**, optionally add a description of the release.

6 For **Baseline to be Released**, type the name of the baseline from which you want to make the release, or click the browse button to select it.

7 For **Release Directory**, do one of the following:

■ To select a release directory, click the Browse button.

■ To use the current workset directory, leave this field blank.

8 If this is a delta release, select the **Delta Release** check box, and for **Previous Release**, type the release name.

9 Click OK. Dimensions sends an e-mail notifying you when the operation is completed.

Desktop client   **To create a release:**

1 Select the baseline from which you want to create the release.

NOTE If you select multiple baselines, the first baseline in the list is used.

---

2 Select File | New | Release.
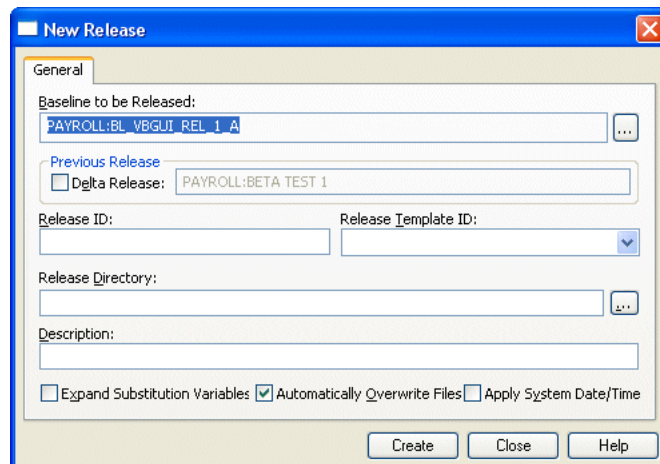
3 In the New Release dialog box, check that the correct baseline is displayed in **Baseline to be Released**. If necessary, click Browse and select a baseline.

4 If this is a delta release, select the **Delta Release** check box, and for **Previous Release**, type the release name.

5 For **Release ID**, type a name for the release. The name must be unique within the product. Dimensions does not record

variants, versions, or revisions for a release, therefore make the name as specific as possible. For example:

```
Release 2.1.0.4 for USA
```

6   If applicable, from the **Release Template ID** list, select a template. The Product Manager creates release templates in the Administration Console.

7   For **Release Directory**, do one of the following:

■   To select a release directory, click the Browse button.

■   To use the current workset directory, leave this field blank.

8   For **Description**, optionally add a description of the release.

9   Click the Create button. You can view the progress of the operation in the Console window. Dimensions sends an e-mail notifying you when the operation is completed.

Deleting a Release

Purpose   Delete a release when it is no longer required.

You cannot delete a release if it is related to a customer. Withdraw the release from the customer first.

When you delete a release, Dimensions removes the release from the database, but does not remove the release directory. You need to remove the release directory manually.

Permissions   You need the Product Manager role on the product that owns the release, or you must be the owner of the baseline from which the release was created.

Web client   **To delete a release:**

1   On the Baselines tab, click the Manage Releases button:

2 On the Releases tab, select one or more releases.

3 Click the Delete button:

4 In the Delete dialog box, check that the release specifications are correct.

5 Click OK.

Desktop client   **To delete a release:**

1 Select one or more releases.

2 Select Release | Delete Customer.

3 In the Delete Release dialog box, check that the release specifications are correct.

4 Click OK.

Selecting a Customer

Purpose   Select a customer so you can perform an operation on it.

Permissions   No permissions required.

Web client   **To select a customer:**

1 On the Baselines tab, click the Manage Releases button:

2 Select the Customers tab.
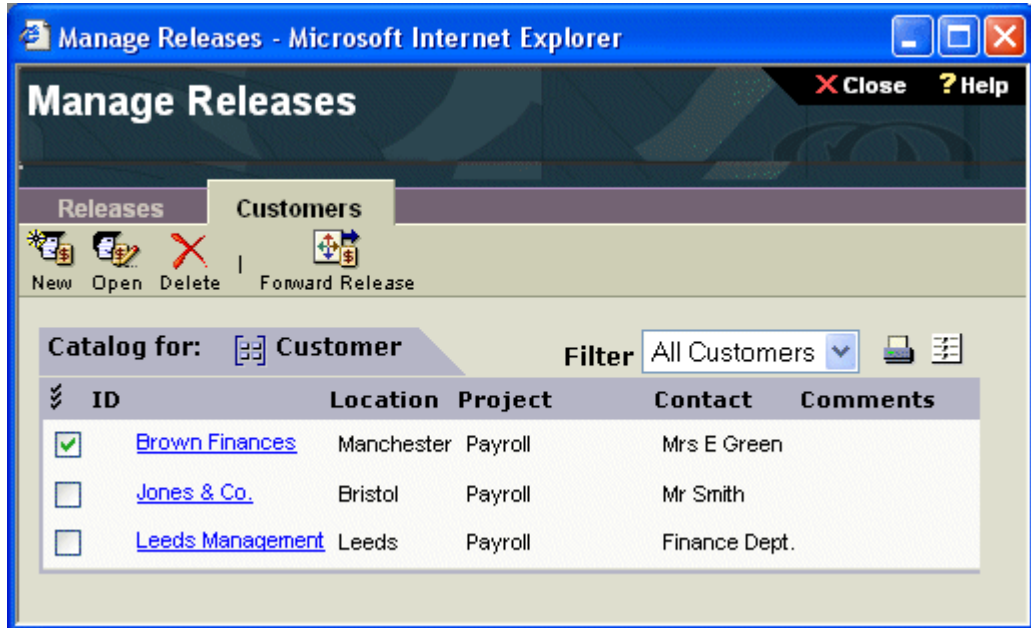
3 Do one of the following:

■ **To select a customer,** click the check box next to it: ☑

■ **To select all customers in the list**, click the select all icon in the column heading: ⚡

Desktop client   **To select a customer:**

1 In the Display Bar, click Baseline/Release.

2 Click the Customer Catalog icon:

3 Do one of the following:

■ **To select a single customer,** click the button next to the customer: ☐➡$, or click anywhere in the row.

- **To select multiple customers**, Ctrl+click each customer.

- **To select a range of customers**, click the first customer in the range, then SHIFT+click the last customer.

- **To select all customers in the list**, click the blank column heading

    or click anywhere in the content window and type Ctrl+A.

Creating a New Customer

Purpose   Add customers when you are ready to forward a release to an internal or external customer.

Permissions   No permissions required.

Web client   **To create a customer:**

  1 On the Baselines tab, click the Manage Releases button:

2 On the Customers tab, click the New button:.

3 For **Name**, type a name for the customer.

4 For **Location**, type the customer's physical location.

5 For **Project**, type the name of the project.
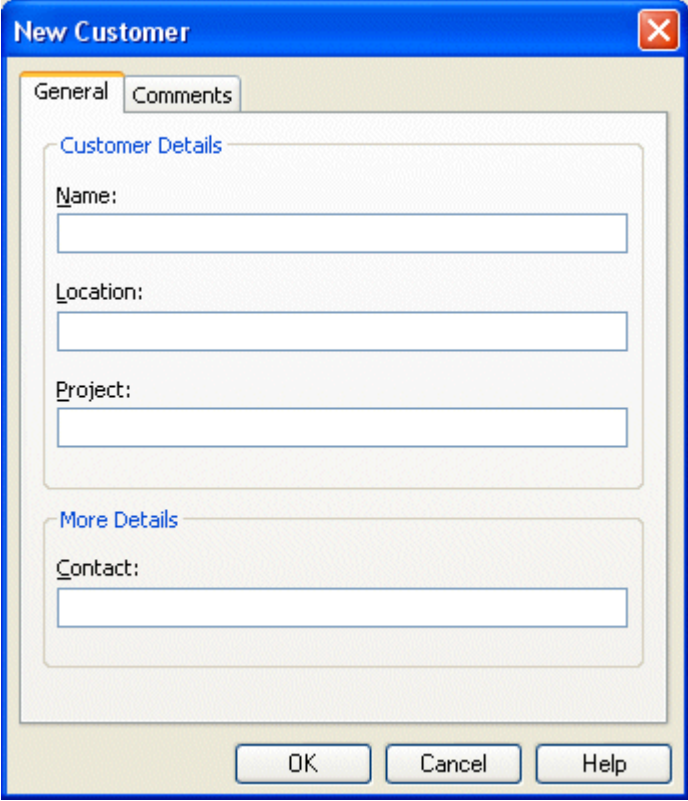
NOTE The combination of customer name, location, and project must be unique in the Dimensions database.

---

6 Optionally, for **Contact Details**, type the customer's contact details.

7 Optionally, for **Comments**, add more information about the customer.

8 Click OK.

Desktop client   **To create a customer:**

1 Select File | New | Customer.

2 On the General tab of the New Customer dialog box, for **Name**, type the customer's name.

3 For **Location**, type the customer's physical location.

4 For **Project**, type the name of the project.

NOTE The combination of customer name, location, and project must be unique in the Dimensions database.

---
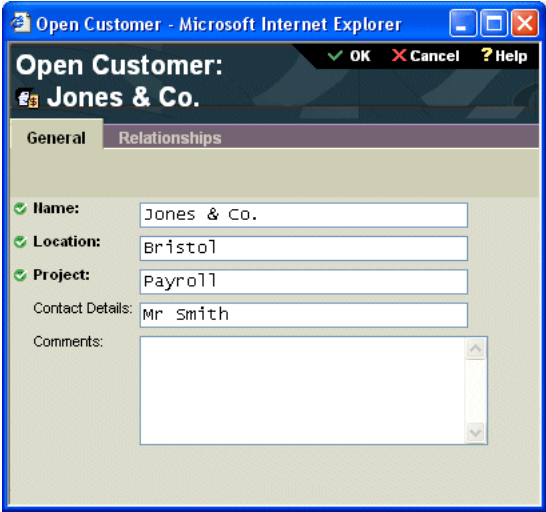
5 Optionally, for Contact, type the customer's contact details.

6 Optionally, click the Comments tab and add more information about the customer.

7 Click the OK button.

Editing a Customer

Purpose

Edit a customer when customer information changes.

If any releases are related to a customer, you can only edit the contact and comment information.

Permissions

No permissions required.

Web client

To edit a customer:

1 On the Baselines tab, click the Manage Releases button:

2 On the Customers tab, select the customer.

3 click the Open button:

4   Edit the fields in the Open Customer dialog box.

5   Click OK.

Desktop client   **To edit a customer:**

1   Select a customer.

2   Select Release | Edit Customer.

3   Edit the information in the Edit Customer dialog box.

4   Click the OK button.

Deleting a Customer

Purpose   Delete a customer when it is no longer required.

You cannot remove a customer that is related to a release.
Withdraw the release from the customer first.

Permissions   No permissions required.

Web client   **To delete a customer:**

1   On the Baselines tab, click the Manage Releases
button:

2   On the Customers tab of the Manage Releases dialog box,
select one or more customers.

3   Click the Delete button:

4   In the Delete dialog box, check that the customer(s) are
correct.

5   Click OK.

Desktop client   **To delete a customer:**

1   Select one or more customers.
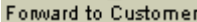
  2 Select Release | Delete Customer.

  3 In the Delete Customer dialog box, verify you have selected
         the correct customers.

  4 Click the OK button.

Forwarding a Release to a Customer

Purpose   Forward a release to a customer when you want to record the fact
                   that the release has been supplied to that customer.

Permissions   No permissions required.

Web client   **To forward one or more releases to a customer:**

  1 On the Baselines tab, click the Manage Releases
         button:

  2 On the Releases tab, select the release(s).

  3 Click the Forward to Customer button:

  4 In the Forward Release to Customer dialog box, select the
         customer.

  5 Click OK.

         To forward a release to one or more customers:

  1 On the Baselines tab, click the Manage Releases
         button:

  2 On the Customers tab, select the customer(s).

  3 Click the Forward Release button:

  4 In the Forward Release to Customer dialog box, select the
         release.

5   Click OK.

Desktop client   **To forward releases to one or more customers:**

1   Select the release(s), and select Release | Forward.

2   In the Release Relationships or Multiple Release Relationships dialog box, click the Add button.

3   In the Find dialog, select criteria to limit your search. For more information, see "Finding Objects" on page 103.

4   To display the results of your search, click the Find Now tab.

5   On the Find Now tab, select one or more customers, and click the OK button. The customer(s) will now be added to the **Related** list.

6   In the Related list, select one or more of the customers you have found.

7   Click the OK button.

To forward one or more releases to a customers:

1   Select the customer(s), right-click and select Forward Release.

2   In the Customer Relationships or Multiple Customer Relationships dialog box, click the Add button.

3   In the Find dialog, select criteria to limit your search. For more information, see "Finding Objects" on page 103.

4   To display the results of your search, click the Find Now tab.

5   On the Find Now tab, select one or more releases, and click the OK button. The release(s) will now be added to the **Related** list.

6   In the Related list, select one or more of the releases you have found.

7   Click the OK button.

Withdrawing a Release from a Customer

Purpose   Withdraw a release from a customer when you want to remove the record of the fact that the release has been supplied to that customer.

Permissions   No permissions required.

Web client   **To withdraw a release from one or more customers:**

1 On the Baselines tab, click the Manage Releases button:

2 On the Releases tab, select the release and click the Open button: or click the name link.

3 Select the Relationships tab:
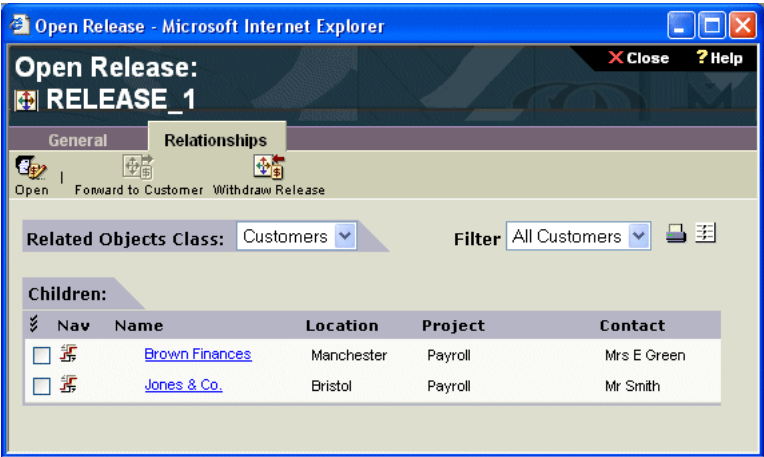
4 Select the customer(s) and click the Withdraw Release button:

5 Click OK.

To withdraw one or more releases from a customer:

1   On the Baselines tab, click the Manage Releases button:

Manage Releases

2   On the Releases tab, select the release and click the Open button: or click the name link.
Open

3   Select the Relationships tab:
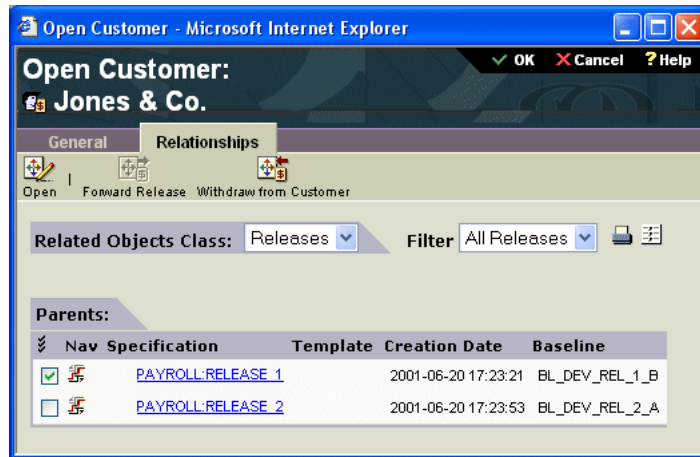
4   Select the customer(s) and click the Withdraw from Customer button:
Withdraw from Customer

5   Click OK.

Desktop client   **To withdraw a release from one or more customers:**

1   Select the release, and select Release | Withdraw.

2   In the **Related** list, select the customer(s) from which you want to withdraw the release.

3   To move the customer(s) to the **To Be Unrelated** list, click the right arrow button:

4   To unrelate the customer(s) in the **To Be Unrelated** list, click the OK button.

To forward one or more releases to a customer:

1 Select the customer, right-click and select Withdraw Release.

2 In the **Related** list, select the release(s) you want to withdraw from the customer.

3 To move the release(s) to the **To Be Unrelated** list, click the right arrow button: ≥

4 To unrelate the release(s) in the **To Be Unrelated** list, click the OK button.

11 Comparing and Merging Files

In this Chapter

About Comparing and Merging Files

This chapter describes how to configure and use The Serena ChangeMan Merge Tool. This tool enables you to compare or merge the differences between files. These files can be revisions of the same item or different items within Dimensions, or files in your work area.

The Serena ChangeMan Merge Tool is invoked from a number of dialog boxes within the web client and desktop client. These are described in "About Comparing and Merging Item Files" on page 243.

NOTE When using the web client on UNIX platforms, the *mgdiff* tool is invoked. Use the Help option for details of how to use it. UNIX users can also choose to plug in their own differencing tools, such as *xxdiff*. For further details, read the *merge_exec* script in your client installation.

The merging process allows you to compare the differences between two (or more) files with a common ancestor or base file, accepting or rejecting the differences between them, and combine the changes into a new file or item revision.

The comparing process allows you compare two files side-by-side to see the additions, deletions, and changes between them. You cannot print or save the comparison file.

NOTE You cannot compare or merge binary files.

The difference between comparing and merging files is:

■   You do not select a target file when you a performing a compare.

■ When you perform a compare from within the desktop or web clients you can only select two files, an ancestor and one derivative.

■ When you merge files, you must resolve all the conflicts before you can complete the merge.

Merging Terms and Definitions

The following table is a list of basic merge terms and definitions:

Term	Definition
Ancestor or base	The common base file from which other files are derived.
Derivative or branch	A version of a file created by making changes in the ancestor file.
Target or output	The final merged file.
Addition	A line of text added to a derivative file that is not in the ancestor file.
Deletion	A line of text deleted in a derivative file that is present in the ancestor file.
Change or Modification	A line of text that was modified in one of the derivative files. The content of this line of text differs between the derivative file and the ancestor file.
Difference	A line of text added, deleted, or modified in a derivative file compared with the ancestor file.
Conflict	A line of text that was changed differently in more than one derivative file. The difference in this line of text is not the same between derivative files and the ancestor file.

The Merge Process

The merge process consists of:

- Selecting an ancestor file as the reference against which the derivatives will be compared.

- Selecting one or more derivatives.

- Selecting the file or item revision to be the target.

- Selecting the differences which have no conflicts and inserting them into the target. If you have selected the Auto Merge option, all the differences except for conflicts will be automatically included in the target.

- Resolving conflicts between the base and derivative files by choosing which version of each conflicting change to include in the target.

- Saving the changes made to the target file.

If you are performing a file merge from within the web client or desktop client, the selection of the ancestor, derivatives and target is made from the dialog within that client, so that when you enter the Serena ChangeMan Merge Tool the main window is displayed with those files already selected. You will then choose which differences to carry forward to the target file.

If you are opening the Serena ChangeMan Merge Tool from outside Dimensions, you will either choose the ancestor, derivatives and target by specifying them in a configuration file, or by completing the Files tab of the Configuration dialog box.

Selecting an Ancestor

The ancestor is the file or item revision that you want to use as your point of reference. It is usually the branch point—the

revision from which a branch begins (typically off the main trunk of development).

If you are merging versions that are located in different branches of development, the ancestor you select should be the version that is the latest to be created which is a common ancestor to *all* of the versions that you want to merge.

In the following example, if you want to merge the differences from revision 1.2.1.2 with revision 1.4.1.1, you would use revision 1.2 as the ancestor. You could use revision 1.1 or 1.0 as the ancestor, but we recommend using the revision that is closest to the files you are merging. The closer the content of the ancestor is to that of the files you are merging, the fewer conflicts you will have to resolve.

```
□⬆ 1.*
    📄 1.4
    📄 1.3
    📄 1.2 ──────────── Recommended ancestor
    📄 1.1 ──────────── Possible ancestor
    📄 1.0 ──────────── Possible ancestor
□⑂ 1.4.1.*
    📄 1.4.1.1 ──────── Derivative 2
    📄 1.4.1.0
□⑂ 1.2.1.*
    📄 1.2.1.2 ──────── Derivative 1
    📄 1.2.1.1
    📄 1.2.1.0
```
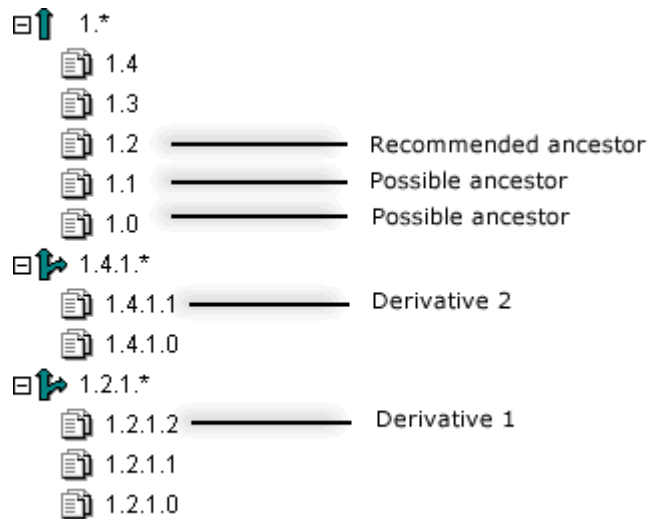
About Resolving Conflicts In the Merge Tool

The Merge Tool identifies a line as a conflict between the derivatives based on the following rules:

■ If a line is an addition in more than one derivative, but is different between the derivatives

■ If a line is a deletion in at least one derivative and is marked as a modification in at least one other derivative

■ If a line is a modification in more than one derivative but is different between the derivatives.

The example below shows a modification conflict in the fourth row. This line has been modified differently in the two derivatives. The line has a background color of dark yellow, meaning that it is a modification. It also has a background pattern that indicates that it is a conflict. The fourth row of the target shows that nothing has yet been inserted for this line, and it has the comment <Conflict> against it.

Ancestor and derivatives with conflict unselected
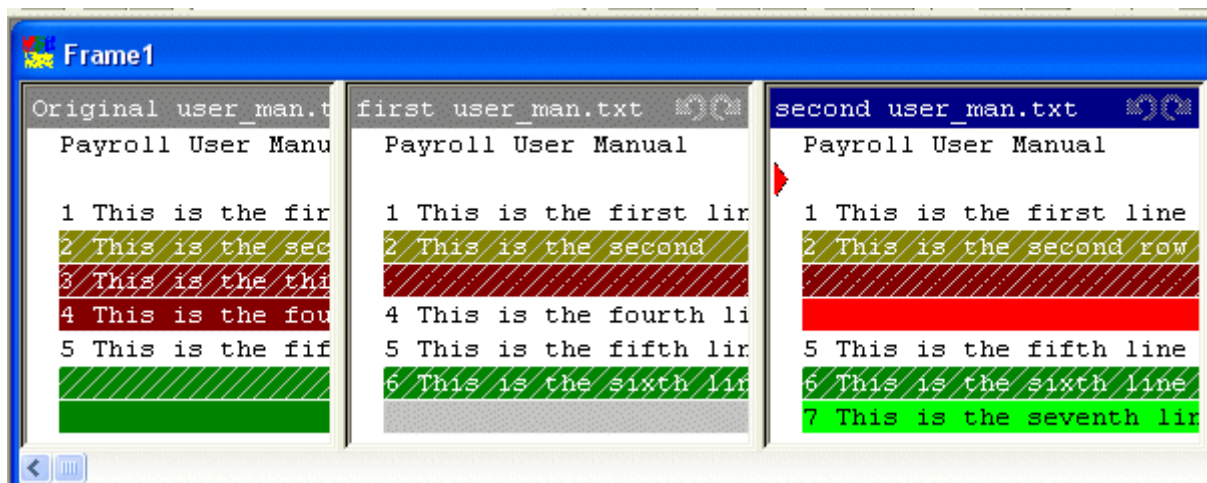
Target file
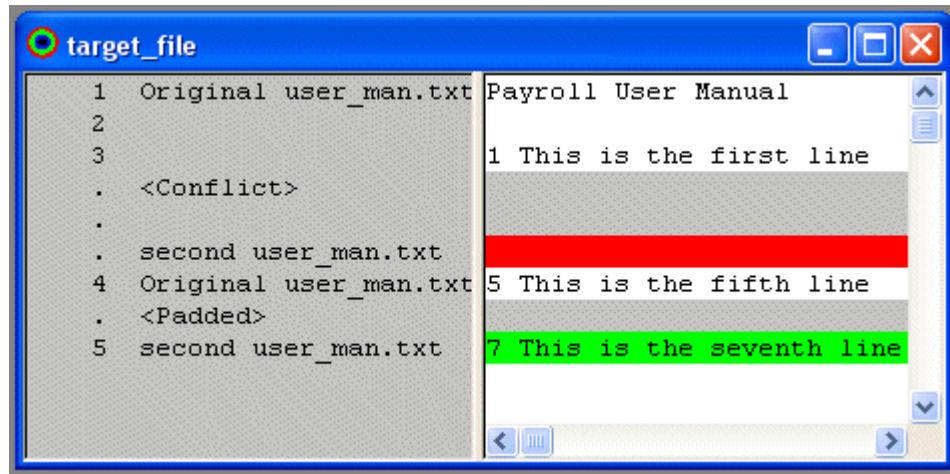
In the next example below, the version of this line from the second derivative has been selected for inclusion in the target by right-clicking it. The "selected" line has changed color to bright yellow to indicate a selected modification. The background pattern has changed to indicate a resolved conflict. Line 4 of the target shows that the difference has been inserted from the derivative *second user_man.txt* and the comment <Conflict> no longer appears against that line.

Conflict selected from second derivative
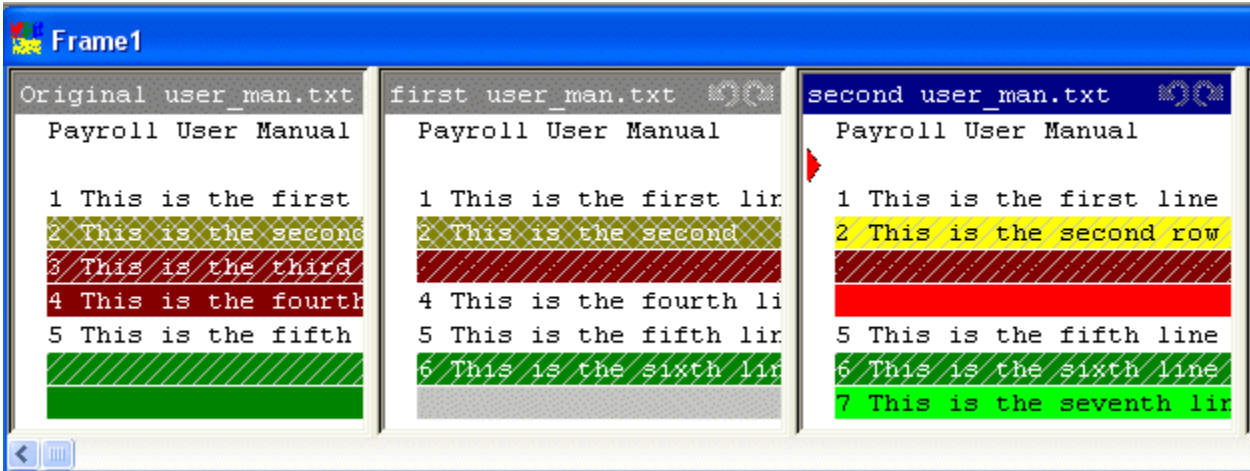
Target file with selected modification inserted
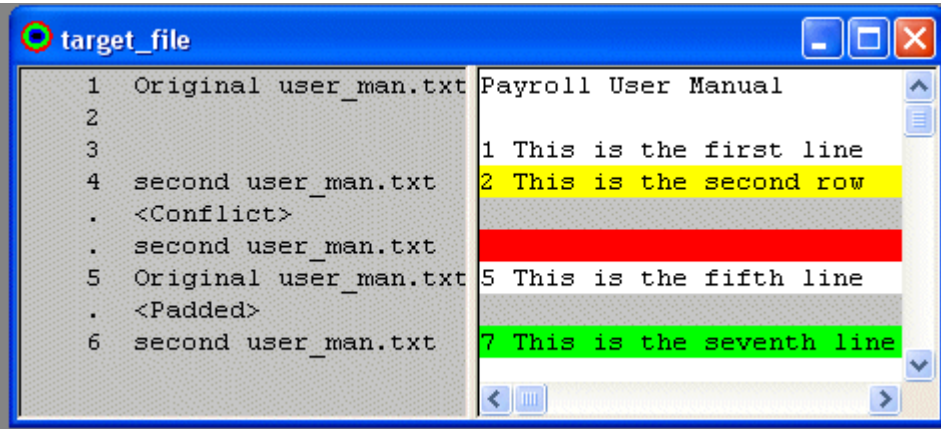
Basics of the Merge Tool

About Starting the Merge Tool

The Serena ChangeMan Merge Tool is a Microsoft Windows-based application that enables you to compare and merge files.

You can start the Merge Tool in the following ways:

■ From a number of dialogs in the Dimensions desktop client or web client where you specify the item revisions or files for the merge or compare.

■ Specifying the ancestor, target and derivative files in a Configuration file and passing the file as a parameter to the Merge Tool.

■ Opening the Serena ChangeMan Merge Tool and specifying the files you want to merge or compare in the Files tab of the Configuration dialog.

About the Main Window
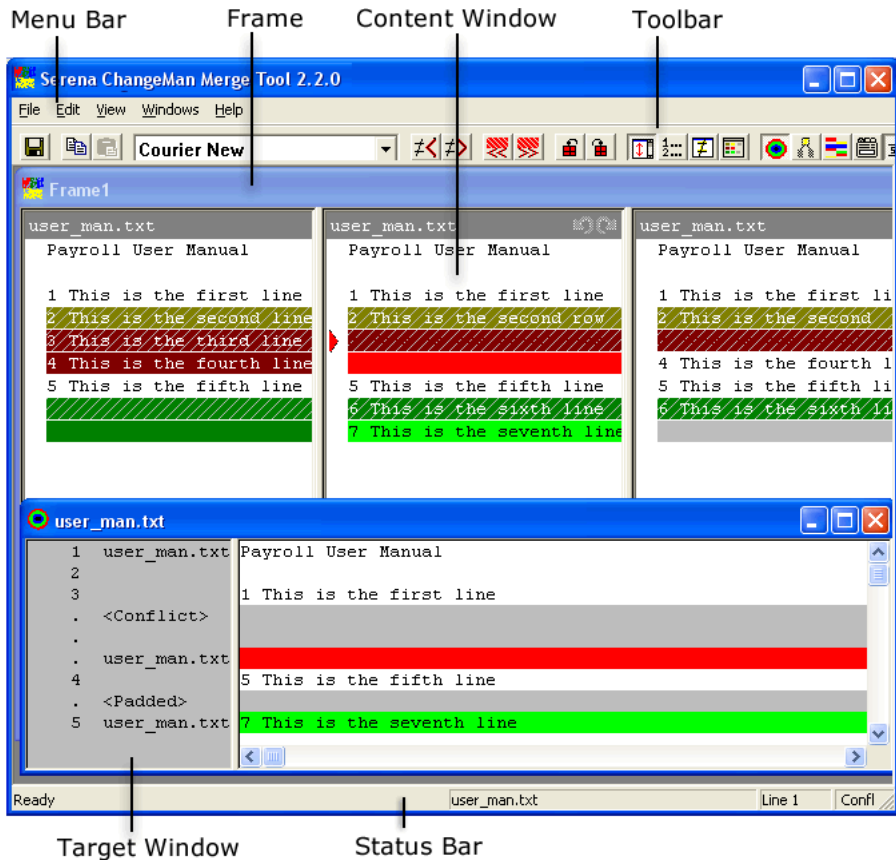
The main items in the main window of the Serena ChangeMan Merge Tool are described below.

■ **Menu bar.** The menu bar contains menus that enable you to carry out all of the Merge Tool commands.

■ **Toolbar.** The toolbar contains buttons for commonly used commands. Slowly moving the mouse across these buttons displays their purpose (and also displays text in the status bar at the bottom of the screen).

■ **Frame.** The frame contains views of the files you have selected to merge or compare.

Content windows. A content window for each file shows the lines of text in the file. You can choose which windows appear by selecting or deselecting them in the Windows menu or clicking corresponding buttons on the toolbar. Lines of text are color-coded to indicate their relationship to the ancestor and the derivative files. The windows that you can display are:

■ The Ancestor window

■ The Derivative window for each derivative file

■ The Consolidated Views window

■ The Target window.

Status bar. The left area of the status bar describes the purpose of menu items as you navigate through menus. This area similarly shows messages which describe the actions of tool bar buttons as you move the mouse over them.

The right area of the status bar displays:

■ The name of the file currently being processed and the corresponding line number.

■ A conflict report showing the number of conflict lines and the number of conflict lines which have been resolved for the derivative currently being processed.

About the Content Windows

The content windows show the lines in the files you have selected and their relationship to the Ancestor and each other.

The windows you can display are:

■ **Derivative Frame**. This shows the derivatives you have selected side by side. You can also choose whether to include the

362 Chapter 11 Comparing and Merging Files

Ancestor and/or the Consolidated View displays within this window using the Configuration dialog box.
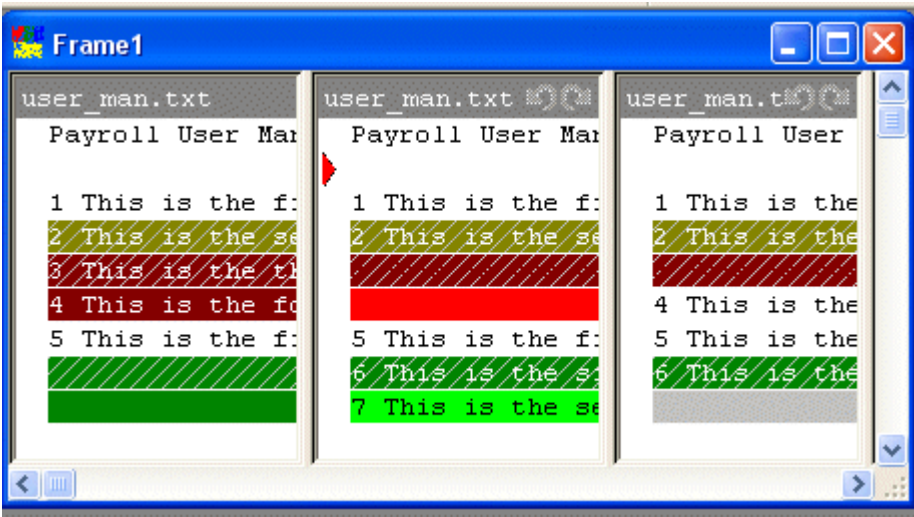
- ■ **Ancestor**. This shows the lines of text in the ancestor file. You can choose to display the ancestor in the Derivative Frame or in its own separate window.

- ■ **Target**. This shows the lines selected for inclusion in the target file. The left pane has an entry against each line telling you which file it came from and whether it is a conflict. You can also edit the text in this window.

Serena® ChangeMan® Dimensions™
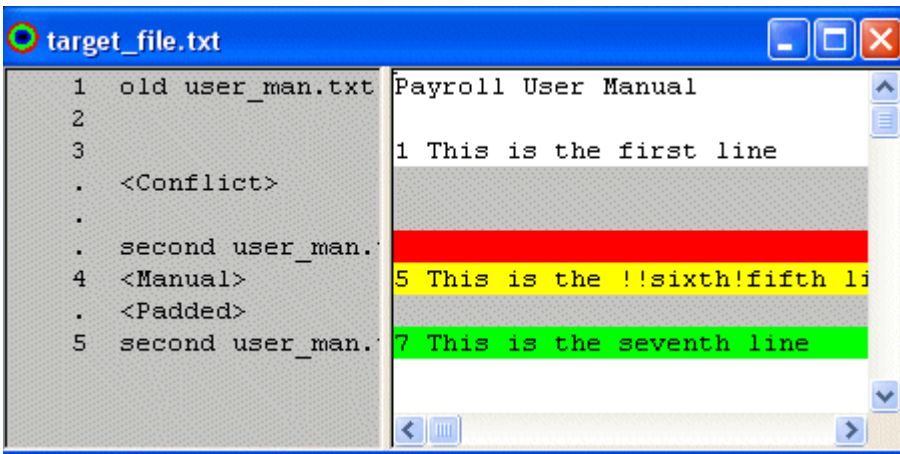
■ **Consolidated View**. The Consolidated View provides a non-textual visual representation of the differences made to the derivatives across all the Derivative Frame windows. It is particularly useful when merging a large number of files. The Consolidated View window allows the user to ascertain how many differences there are and where they have occurred. Double clicking a line in the Consolidated View window will move the cursor to the corresponding line of the selected derivative in the Derivative Frame window.
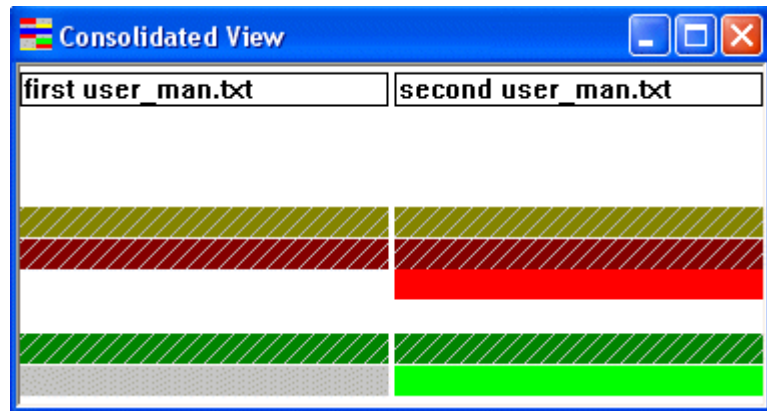
■ **Global Comparison**. This window displays a few lines from each derivative in the location of a selected line. It provides

you with quick and easy comparison of equivalent text blocks across many derivatives.
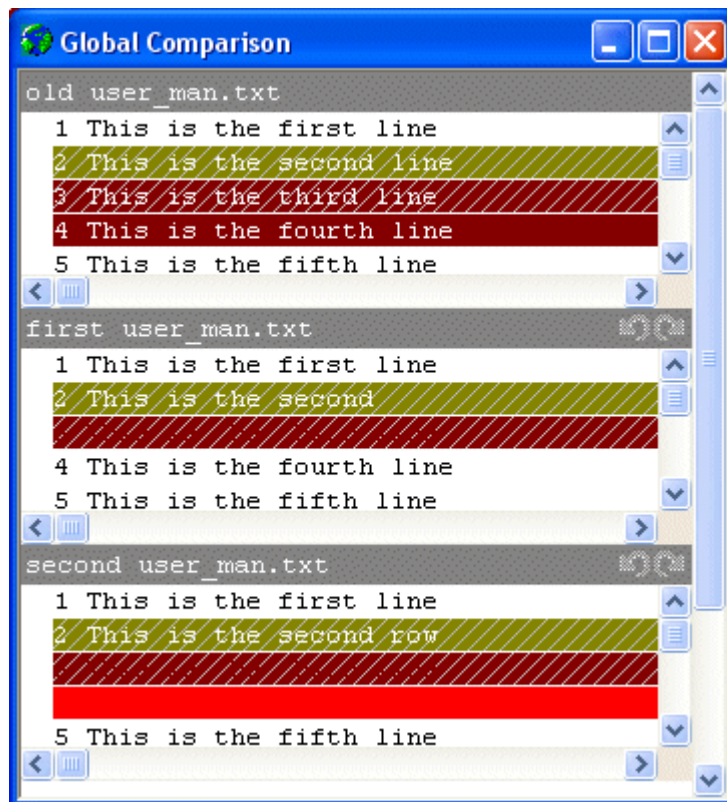
■ **Error Log**. This window displays any errors which have been detected by the merge tool during the merge operation.

About Identifying the Differences.

A system of colors and patterns helps you identify the differences between the lines in the ancestor and target, and which lines have been selected for inclusion in the target.
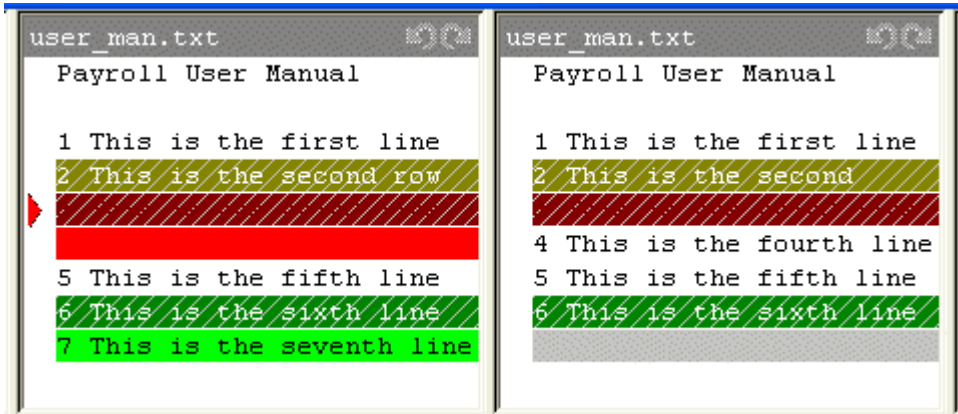
You can customize these using the Colors tab of the Configuration dialog box. The following table shows the defaults.

This background	Indicates this
	Selected addition. This object is included in the target.
	Selected modification. This line is included in the target.
	Selected deletions. This line is excluded from the target.
	Unselected additions. This line is excluded from the target.
	Unselected modification. This line is excluded from the target.
	Unselected deletions. This line is included in the target.

This background	Indicates this
	Conflict. This line conflicts with the corresponding line in other derivatives.
	Resolved Conflict. This line is a conflict that you have already resolved.
	Padded. This is a blank entry inserted to align the corresponding rows between different content windows.
	Highlighted. This is the line to which the current operation will apply.

Viewing the Files

Working with the Content Windows

Purpose
Use the content windows to view the lines of text in the ancestor, derivatives, and target files. You can show or hide these windows and arrange them in the Merge Tool main window.

To show or hide the content windows:

■ **To show or hide the Ancestor,** select Windows | Display Ancestor or click the ▣ button.

■ **To show or hide the Ancestor in the Derivative Frame window,** select Windows | Display Ancestor in Frame or click the ▣ button.

■ **To show or hide the Consolidated View window,** select Windows | Display Consolidated View, or click the ▣ button.

■ **To show or hide the Consolidated View in the Derivative Frame window,** select Windows | Display **Consolidated View** in Frame or click the ▣ button.

■ **To show or hide the Target window,** select Windows | Display Target, or click the ⊙ button.

■ **To display the Global Comparison window,** double click on a changed line in the ancestor or a derivative. Note that you cannot do this on an unchanged or padded line.

■ **To display the Error Log window,** select File | Error Log.

■ **To open the Color Tips window,** select View | Color Tips, press Ctrl+T, or click the ▦ button. This window displays the current settings of colors and patterns used to identify the differences.

To change the way the windows are displayed:

■ **To synchronize scrolling,** select View | Sync Scrolling or click the ↕ button. When this option is selected, the lines in the other windows are scrolled in synchronization when you scroll one window. If it is not set, they can be scrolled independently.

■ **To show or hide the line numbers,** select View | Show Line Numbers or click the ⅟₂… button.

■ **To show only differences,** select View | Show Only Differences or click the ⤱ button. When this option is selected, only lines that differ between one or more derivatives are displayed.

■ **To set automatic resizing of windows on or off,** select Windows | Auto Resize or click the ↔ button.

■ **To show or hide the status bar,** select View | Status bar or click the 𝖲𝖳𝖠𝖳 button.

■ **To change the font style** in the Derivative Frame, Global Comparison and Ancestor windows, Click the font style combo box in the tool bar:

| ANSI Fixed font | ▾ |

and select the new font style.

> **NOTE** If you are comparing files using a double-byte character set, you will need to select "The system font" in this list.

Navigating the Content Windows

Purpose

Use the various functions provided by the Merge Tool to move between windows, and text lines within windows, so that you can view and select the differences and decide which lines to include in the target.

To navigate the content windows:

■ **To move between windows,** click the Next Window button: or press F8 to go to the next window; click the Prev Window button: or press F7 to go to the previous window.

■ **To move between conflicting lines,** click the Next Conflict button: or press F6 to go to the next conflict; click the Prev Conflict button: or press F5 to go to the previous conflict.

■ **To move between line differences,** click the Next Difference button: or press F4 to go to the next line where there is a difference; click the Prev Difference button: or press F3 to go to the previous line where there is a difference.

■ **To navigate using the Consolidated View**, double click a changed line to go to that line in the selected derivative.

■ **To navigate using the Ancestor Window**, double click a changed line to go to that line in the selected derivative. Note that this only works when the target is displayed in its own window and not the Derivative Frame window.

■ **To go to a line number in the current derivative or ancestor**
select Edit | Go To, or press Ctrl+G.

```
Go to line                              [X]
  Enter the line number:          ┌──────────┐
  ┌─────────────────────────┐     │    OK    │
  │ 0                       │     └──────────┘
  └─────────────────────────┘     ┌──────────┐
                                  │  Cancel  │
                                  └──────────┘
```
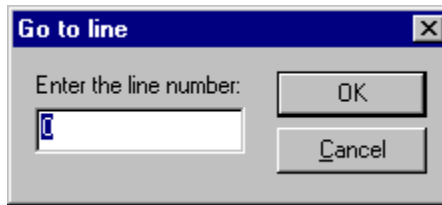
Enter the required line number.

Manually Completing the Merge

Purpose   Manually complete the merge when:

■ There are conflicting differences between the derivatives and
you need to select which versions to include in the target.

■ You have not selected the Auto Merge option and you need
to manually select which differences are included from the
derivatives or ancestor.

■ You wish to make other changes by editing the target file.

To select the differences for inclusion in the target:

■ **To select a difference for inclusion in the target,** right click the
required line in the ancestor or derivative window. To select
two adjacent differences, use Ctrl and right click. The color of
the line(s) will change to the selected color.

■ **To deselect a difference from inclusion in the target,** right
click a selected line. To deselect two adjacent differences, use
Ctrl and right click. The color of the line(s) will change to the
unselected color.

■ **To insert all the differences,** including conflicts, for a given
derivative into the target, select Edit | Select All, or press Ctrl +

A. All the lines in the selected derivative will change to the corresponding "selected" colors.

NOTE Selecting all differences in one derivative does not necessarily mean you have deselected all differences in another derivative.

To Edit the Target File:

To copy text, select the text to be inserted into the target and click the Copy button: , or press Ctrl+C.

To paste text into the target, position the cursor where you want to insert the text and click the Paste button , or press Ctrl+V.

To edit text in the target, type or overtype the text in the target window.

To undo editing, select Edit | Undo, or press Ctrl+Z.

To save the Target File:

Do one of the following:

- Select File | Save Target
- Click the button
- Press Ctrl+S

If you have not saved the target when exiting the Merge Tool, and the option **Always perform merge interactively** has been set, a dialog box appears prompting you to save the target. If there are any unresolved conflicts a further dialog box appears warning you that there are unresolved conflicts.

Configuring the Merge Tool

You can configure the various options in the Serena ChangeMan Merge Tool either by using the Configuration dialog box or by using a configuration file. Details of how to use a configuration file is described in "About Serena ChangeMan Merge Tool Configuration Files" on page 381 of the Dimensions User's Guide.

Selecting the Files

Purpose   Select the files to be used for a file merge or compare operation if you are running the Merge Tool from outside Dimensions and want to specify the ancestor, target, or derivative files.
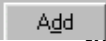
To select the files:

1 In the main window, select View | Configuration or click the Configuration button: on the toolbar.
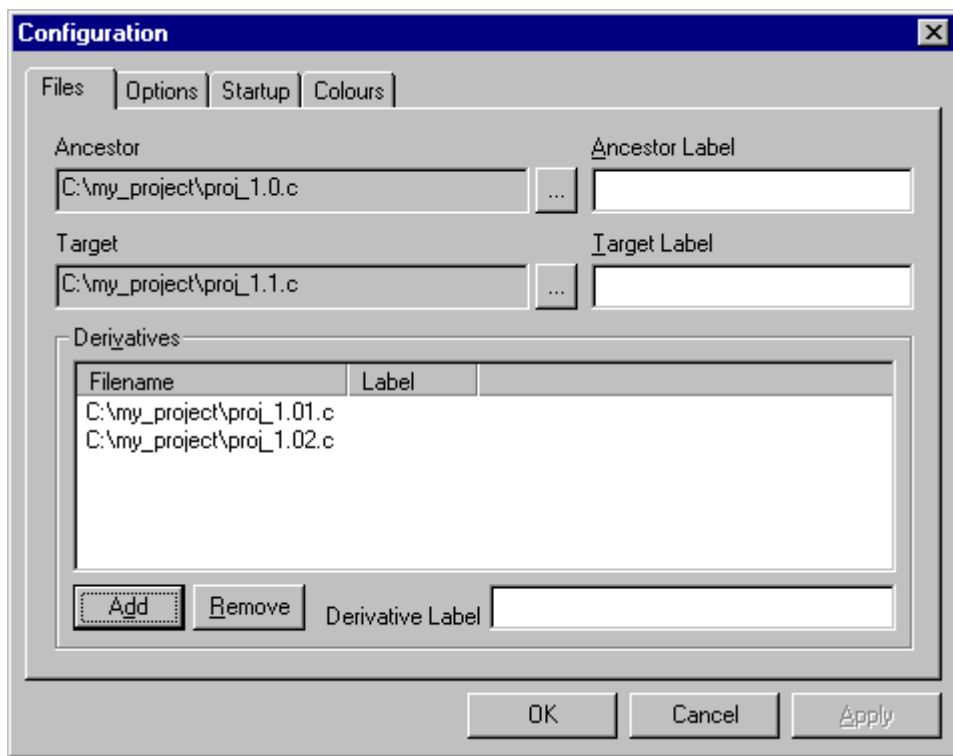
2 To choose the ancestor file, click the Ancestor browse button: , choose the file you wish to insert as the Ancestor file, and click the OK button. The file pathname will be inserted into the **Ancestor** field and the filename automatically inserted into the **Ancestor Label** field.

3 If you want a different title to be displayed in the Ancestor window, type the name in the **Ancestor Label** field.

4 To choose the Target file, click the Target browse button: , choose the file you wish to insert as the Target file, or type the name if it does not already exist, and click the OK button.

The file pathname will be inserted into the **Target** field and the filename automatically inserted into the **Target Label** field.

5   If you want a different title to be displayed in the Target window, type the name in the **Target Label** field.

6   To choose a derivative file, click the [Add] button, choose the file you wish to insert as the Ancestor file, and click the OK button. The file pathname will be inserted into the Derivatives list and the filename automatically inserted into the **Label** field.

7   If you want a different title to be displayed in the Derivative window, select the file in the Derivatives list and type the name in the **Derivative Label** field.

8   Repeat steps 6 and 7 for each derivative to want to merge.

9   If you want to remove a file from the Derivatives list, select it and click the [Remove] button.

10   When you have chosen all the files, click the OK button.

Setting the Merge Tool Options

Purpose   Set the Merge Tool options when you want to configure the way the files are compared and merged.

To select the options:

1   In the main window, select View | Configuration, or click the
Configuration button: 🗒 on the toolbar, and select the
Options tab.
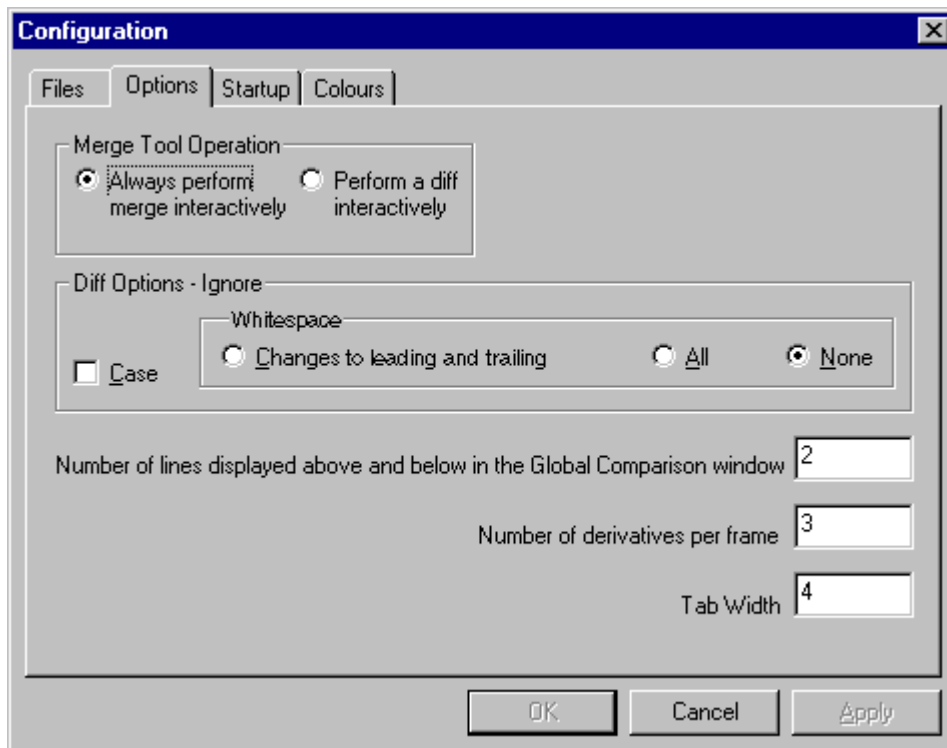
2   Set the required options as described in the following:

■ **To make the saving of the target file compulsory,** so that
when exiting the Merge Tool you are prompted to save it,
select **Always perform merge interactively**.

■ **To view the resulting merge without having to save the
Target file**, so that you are not prompted to save the
Target, select **Perform a diff interactively**.

■ **To ignore the case** when comparing text between files,
check the **Case** check box.

- **To ignore changes to leading and trailing whitespace**, when comparing text between files, select **Changes to leading and trailing** in the **Whitespace** section**.**

- **To ignore all changes to whitespace**, when comparing text between files, select **All** in the **Whitespace** section**.**

- **To include changes to whitespace** when comparing text between files, select **None** in the **Whitespace** section**.**

- **To set the number of lines displayed** above and below the selected line in the Global Comparison window, enter an integer value in the **Number of lines displayed above and below in the Global Comparison window** field.

NOTE The selected line is included in the count.

- **To set the maximum number of derivatives** which are displayed in each Derivative Frame window, enter an integer value in the **Number of derivatives per frame** field. This means that if the number of derivatives selected is greater than the **Number of derivatives per frame** value, then the Merge Tool automatically creates additional Derivative Frame windows for the extra derivatives.

- **To set the number of spaces allocated per tab** in the Merge Tool, enter an integer value in the **Tab Width** field.

Setting the Startup Behavior

Purpose   Set the startup behavior when you want to configure the way the Merge Tool behaves as default when you first open it.

To set the startup behavior:

1 In the main window, select View | Configuration, or click the Configuration button: 📖 on the toolbar, and select the Startup tab.
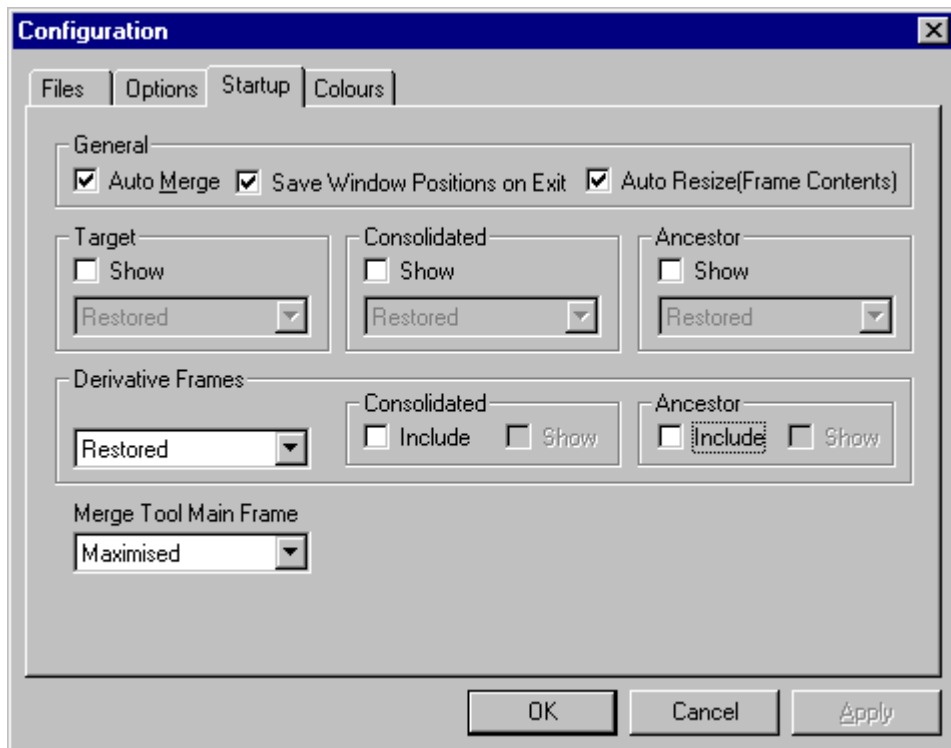
2 Set the required options as described in the following:

■ **To automatically insert all of the differences into the target,** select **Auto Merge**. This means that all differences apart from conflicts will be inserted into the target as soon as you start the merge.

■ **To be required to manually insert differences into the target**, deselect **Auto Merge**. This means you will be required to manually select all the differences you want to include in the target.

- **To save all window positions automatically on exit**, select the **Save Window Positions on Exit** check box. This means that the positions of the windows will be retained the next time you start the Merge Tool.

- **To have the Derivative Frame window automatically resized**, select **AutoResize (Frame Contents).**

- **To display the Target, Ancestor, or Consolidated View windows** when the merge starts, select the corresponding **Show** check box.

- **To choose how the Target, Ancestor, or Consolidated View Windows will be displayed** when the merge starts, make sure you have selected the corresponding **Show** check box, and select minimized, maximized, or restored from the list.

- **To choose how the Derivative Frame window will be displayed** when the merge starts, select minimized, maximized, or restored from the list.

- **To include the Ancestor file or the Consolidated View within the Derivative Frame window**, select the corresponding **Include** check box.

- **To display the Ancestor file or the Consolidated View within the Derivative Frame window** when the merge starts, select the corresponding **Show** check box. If the corresponding **Show** option is not selected, they will not be displayed until you click the appropriate toolbar button: Display Ancestor in Frame: or Display Consolidated in Frame:

- **To choose how the Merge Tool main window will be displayed** when the Merge Tool is started, select minimized, maximized, or restored from the list.

Customizing the Colors

Purpose   Customize the colors when you want to choose which colors or
               patterns are used to identify the difference or status of each line
               in the content windows.

To customize the colors:

1   In the main window, select View | Configuration, or click the
    Configuration button: 📄 on the toolbar, and select the
    Colors tab.
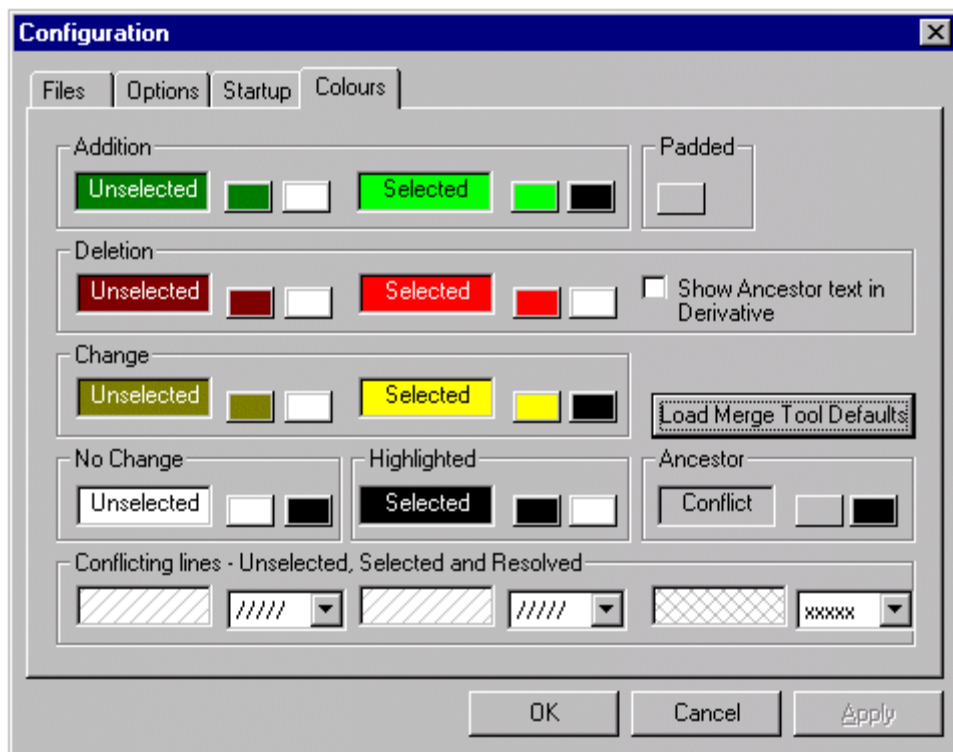
2   Set the colors and patterns used to identify the difference
    and status of the various lines in the content windows.

3   When you have finished, click Apply to commit the changes
    and continue using the Configuration dialog box, or click OK
    to commit the changes and quit the dialog box

To determine the colors:

- **To locate the type of difference**, use the section headed Addition, Deletion, Change, No Change, Padded, or Ancestor.

- **To set the Unselected color,** use the left pair of buttons. This will determine the color that indicates that the line is not yet selected for the target file.

- **To set the Selected color,** use the left pair of buttons. This will determine the color that indicates that the line has been selected for the target file.

- **To set a background color**, click the left button of the pair.

- **To set a text color,** click the right button of the pair.

To set a color:

1 Click the button corresponding to the color you want to change.

```
Color                              ? X
Basic colors:

Custom colors:

        Define Custom Colors >>
      OK            Cancel
```

2 Select the required color from the color palette.

3 If you want to further customize the color, click the Define Custom Colors button: [Define Custom Colors >>]

- Set the color either by entering values in the **Hue, Sat, Lum, Red, Green** and **Blue** fields, or dragging the arrow key in the color scrollbar. The color will be displayed in the **Color|Solid** box.

- Click the Add to Custom Colors button:

  [Add to Custom Colors]

  to add the color to **Custom colors** box.

4 When you have chosen the color, click OK. You will be returned to the Colors tab and the color of the selected button will have changed.

To set the other options on the Colors tab:

■ **To choose the pattern for conflicts**, choose a pattern from the corresponding list for Unselected, Selected, or Resolved. This pattern will appear as a background against the line.

■ **To display the ancestor text for deleted lines** in the Derivatives, click the **Show Ancestor text in Derivative** check box.

■ **To restore the settings to the defaults**, click the Load Merge Tool Defaults button.

About Serena ChangeMan Merge Tool Configuration Files

Use a merge configuration file to control merge options when merging files from the command line. You specify a merge configuration file as the argument to the `pvcsmerge` command.

The following example configuration file starts the Serena ChangeMan Merge Tool with an ancestor file named "proj_1.0.c", a target file named "proj_1.1.c, and two derivatives, "proj_1.01.c" and proj_1.02.c".

```
#Labels are in double quotation marks

Ancestor=proj_1.0.c, "Ancestor"
Target=proj_1.1.c, "Target"
Derivatives=proj_1.01.c, "Derivative1";
proj_1.02.c,"Derivative2"
Interactive=Always
AutoMerge=On
IgnoreCase=Off
IgnoreBlanks=None
ShowConsolidated=Off
```

```
ShowTarget=Off
ShowAncestor=Off
FrameAutoResize=On
IncludeFrameAncestor=On
ShowFrameAncestor=On
IncludeFrameAncestor=On
ShowFrameAncestor=On
ShowDeletedText=Off
ConflictHeight=2
NumberDerivatives=3
TabWidth=4
SaveOnExit=Off
```

NOTE You do not have to specify all the above merge parameters, only Ancestor and Derivatives are mandatory.

Merge Tool Parameters

The following table displays the Merge Tool parameters which can be specified in the Configuration file, and their default values if no Configuration file is specified and no changes are made in the Configuration dialog box:

Option	Value
Ancestor	Enter ancestor file name which can, optionally, be followed by a comma (,) and a label string. If a user label string is not specified, a default label is provided.
Target	Enter target file name which can, optionally, be followed by a comma (,) and a label string. If a user label string is not specified, a default label is provided.
Derivatives	Enter derivative file names, separated by a semi colon (;). Each derivative can be followed by a comma (,) and a label string. If a user label is not specified, a default label is provided.
Interactive	Indicates whether you are prompted to save the target when exiting the Merge Tool. To be prompted, use **Always**. To not be prompted, use **Browse**. The default value is **Always**.
AutoMerge	Insert differences into the Target file automatically at startup. To disable automatic merge, use **Off**. To enable automatic merge, use **On**. The default value is **Off**.
IgnoreCase	Indicates whether case is ignored when comparing text To ignore case, use **On**. To make comparisons case-sensitive, use **Off**. The default value is **Off**.

Option	Value
IgnoreBlanks	Indicates whether whitespace is ignored when comparing text
	To ignore all whitespace, use **All**.
	To ignore trailing whitespace, use **Trailing**.
	To include whitespace, use **None**.
	The default value is **None**.
ShowConsolidated	Shows or hides the Consolidated Views window on startup.
	To hide the Consolidated Views window, use **Off**.
	To show the Consolidated Views window, use **On**.
	The default value is **Off**.
ShowTarget	Shows or hides the Target window on startup.
	To hide the Target window, use **Off**.
	To show the Target window, use **On**.
	The default value is **Off**.
ShowAncestor	Shows or hides the Ancestor window on startup.
	To hide the Ancestor window, use **Off**.
	To show the Ancestor window, use **On**.
	The default value is **Off**.
FrameAutoResize	Automatically resizes the Derivative Frame windows.
	To not autoresize the window, use **Off**.
	To autoresize the window, use **On**.
	The default value is **Off**.

Option	Value
IncludeFrameAncestor	Allows the Ancestor to be included in the Derivative Frame window.
	To not include the Ancestor, use **Off**.
	To include the Ancestor, use **On**.
	The default value is **Off**.
ShowFrameAncestor	Shows the Ancestor in the Derivative Frame window on startup.
	To not show the Ancestor, use **Off**.
	To show the Ancestor, use **On**.
	The default value is **Off**.
IncludeFrameConsolidated	Allows the Consolidated View to be included in the Derivative Frame window.
	To not include the Consolidated View, use **Off**.
	To include the Consolidated View, use **On**.
	The default value is **Off**.
ShowFrameConsolidated	Shows the Consolidated View in the Derivative Frame window on startup.
	To not show the Consolidated View, use **Off**.
	To show the Consolidated View, use **On**.
	The default value is **Off**.
ShowDeletedText	Shows or hides the text of deleted lines.
	To not show deleted text, use **Off**.
	To show deleted text, use **On**.
	The default value is **Off**.
ConflictHeight	Sets the number of lines above and below the selected line in the Global View window.
	Enter an Integer Number.
	The default value is **2**.

Option	Value
TabWidth	Sets the number of spaces displayed per tab.
	Enter an Integer Number.
	The default value is **4**.
SaveOnExit	Automatically saves the Target file on exit.
	To not automatically save the Target, use **Off**.
	To automatically save the Target, use **On**.
	The default value is **Off**.

Additional Configuration Options for Dimensions

When using the Merge Tool within Dimensions, there are some additional configuration options for excluding line numbers when comparing COBOL files. Note that these options are not available when using the Merge Tool in a stand-alone situation.

These options are specified using entries in the *dm.cfg* file. The following example entries exclude columns 1 - 6 and 73 - end of line for COBOL files (extensions .cbl and .cob)

```
PCMS_LANGUAGES                      MFSRC
PCMS_LANGUAGE_EXTENSIONS_COBOL      cbl, cob
PCMS_COMPARE_START_COBOL            7
PCMS_COMPARE_END_COBOL              72
```

12 Comparing and Merging Projects

In this Chapter

About Comparing and Merging Projects

The Serena ChangeMan Project Merge Tool enables you to compare or merge item revisions from two or more *projects*. In the Project Merge Tool, a project is a set of item revisions in a workset, a baseline, or a directory.

When you *compare projects* in the Project Merge Tool, you view the differences between two projects. When you *merge projects*, you view the differences and resolve the conflicts, with the result being a single project.

The difference between comparing and merging projects is:

■ You can only compare two projects. You can merge two or more projects.

■ When you merge projects, you must resolve all the conflicts.

The Project Merge Tool uses an *ancestor*, *derivatives*, and a *target* to compare and merge projects. There is a base project, called the ancestor, to which all the other projects, called derivatives, are compared. If you are merging projects, the resulting merged project is called the target.

Item revisions in the derivatives and the target can have one of the following states in relation to the ancestor and to each other:

■ **Unchanged:** The contents of the item revision or directory are the same between the ancestor and the derivative.

■ **Modification:** The contents of an item revision or directory differs from the ancestor.

■ **Addition:** An item revision or directory is not in the ancestor.

■ **Deletion:** An item revision or directory in the ancestor or the derivatives is not included in the target.

■ **Conflict:** An item revision or directory in a derivative differs from the ancestor or other derivatives.

■ **Padded:** A blank entry that is automatically inserted by the Project Merge Tool to align the item revisions in the ancestor, derivatives, and target.

About Conflicts Between Derivatives

The Project Merge Tool identifies conflicts between derivatives based on the following rules:

■ If an edit revision is an addition in more than one derivative but is different between the derivatives

■ If an edit revision is a deletion in at least one derivative and is marked as a modification in at least one other derivative

■ If an edit revision is a modification in more than one derivative but is different between the derivatives.

Basics of the Project Merge Tool

About Starting the Project Merge Tool

The Project Merge Tool is a Microsoft Windows-based application that enables you to compare and merge directories, worksets, and baselines.

The recommended screen resolution for the Project Merge Tool is 1024 x 768. It runs with a screen resolution of 800 x 600 on any Windows PC with an SVGA or equivalent display card with a minimum of 16 colors.

You can start Project Merge Tool in the following ways:

■ From the Dimensions desktop client

■ From the Windows desktop or taskbar

■ From the Dimensions command line.

Starting the Project Merge Tool to Merge Projects

Purpose   Merge two or more projects and resolve conflicts, with the result being a single project. Projects are baselines, worksets, or directories.

Permissions   No permissions required.

To start Project Merge Tool from the Dimensions desktop client:

1   Do one of the following:

■ Select Tools | Project Merge.

■ Select Workset | Project | Merge.

■ Select Baseline | Project | Merge.

2 On the Ancestor tab of the Project Merge dialog box, from the **Object Type** list, select **Baseline, File Based,** or **Workset**.
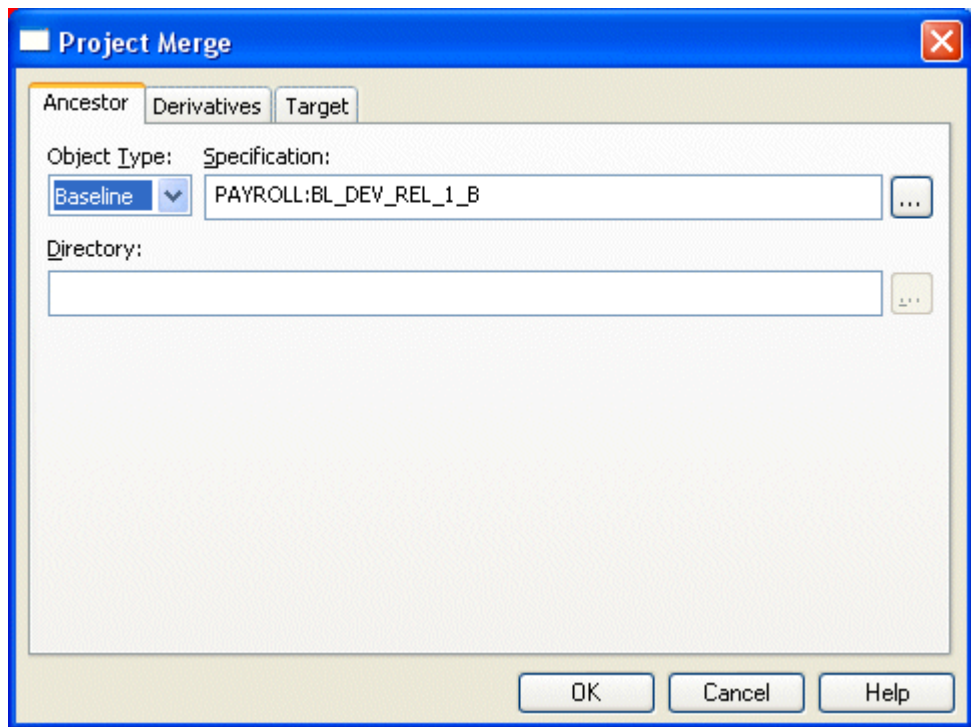
3 To specify the ancestor, do one of the following:

- In the **Specification** field, type a workset or baseline specification, or click Browse to find a workset or a baseline.

- In the **Directory** field, type a directory name, or click Browse to find a directory.

4   Click the Derivatives tab.
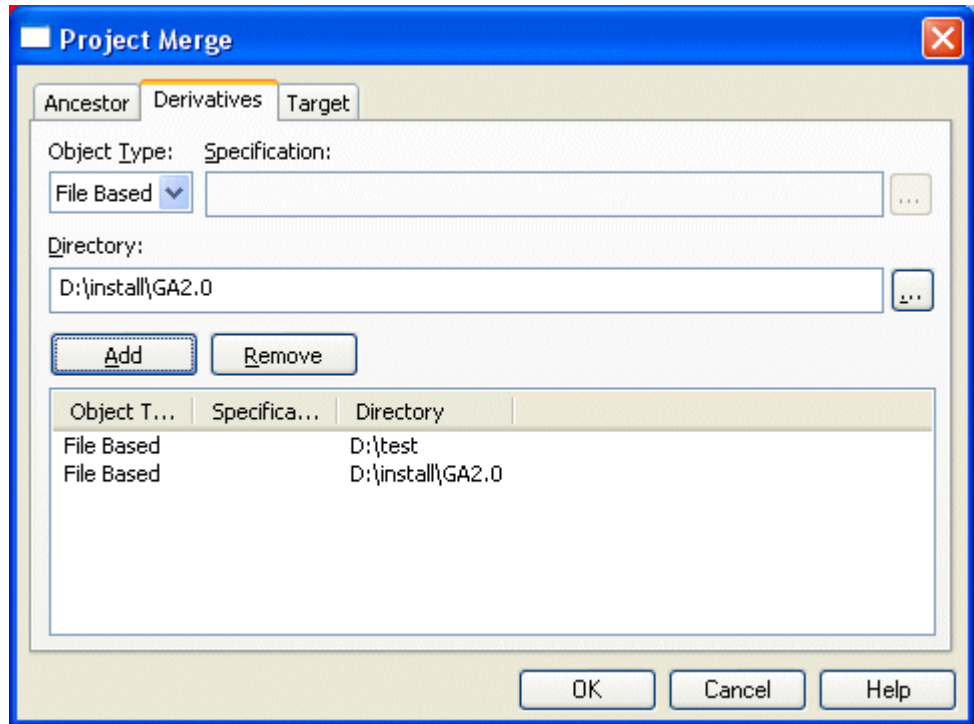
5   To specify a derivative, do the following:

   a   From the **Object Type** list, select **Baseline**, **File Based**, or
         Workset, and do one of the following:

   • In the **Specification** field, type a workset or baseline
      specification, or click Browse to find a workset or a
      baseline.

   • In the **Directory** field, type a directory name, or click
      Browse to find a directory.

   b   Click Add. The derivative is added to the Object Type table.

   c   Repeat steps a and b for each project you want to merge
         with the ancestor project.

6 Click the Target tab.
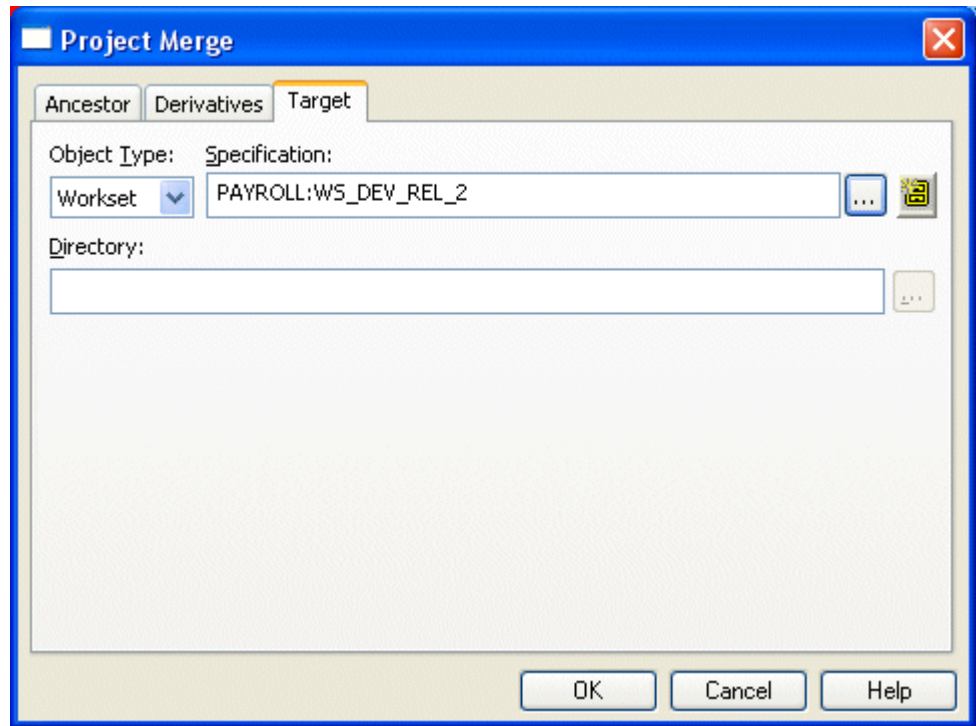
7 To specify the target, from the **Object Type** list, select **File Based** or **Workset**.

8 If you selected **File Based**, for **Directory**, type a directory name, or click Browse to find a directory.

9 If you selected **Workset**, do one of the following:

   ■ For **Specification**, type a workset specification.

   ■ Click Browse to find a workset.

   ■ Click New workset 圖 to create a new workset.

NOTE If you create a new target workset, you need to set the Dimensions upload rules. For more information, see "About Upload Rules" on page 404.

---

10 Click OK. The target workset or directory is not created until you resolved all the conflicts between the ancestors and the derivatives and save the project in Project Merge Tool.

To start Project Merge Tool from the Windows command line:

1 Start the Dimensions desktop client or SCC (Source Code Control).

2 Select Start | Run.

3 In the Run dialog box, type one of the following:

- `projectmerge` *`ancestor_dir`* *`derivative_dir`* `-target` *`dir`*

  where:

  `ancestor_dir` is the name of the ancestor directory.

  `derivative_dir` is the name of the derivative directory. You can enter multiple directory names to compare.

  `-target` *`dir`* is the location of the merged project.

- `projectmerge -config` *`file`*

  where *`file`* is the name of the configuration file. For more information, see "Creating Project Merge Configuration Files" on page 410.

- `projectmerge -target` *`dir`*

  where *`dir`* is the location of the target project.

  In the Select Directories dialog box, type the directories you want to compare, or click Browse to find the directories. The first directory is the ancestor and the second directory is the derivative. You can only add one derivative directory.

4   Click OK.

The Project Merge Tool starts and you can merge the projects.

Starting Project Merge Tool to Compare Projects

Purpose

Compare projects to view differences between two baselines, worksets, or directories.

Permissions

No permissions required.

To start Project Merge Tool from the Dimensions desktop client:

1   Do one of the following:

■   Select Tools | Project Compare.

■   Select Workset | Project | Compare.

■   Select Baseline | Project | Compare.

2   On the Ancestor tab of the Project Compare dialog box, from the **Object Type** list, select **Baseline**, **File Based**, or **Workset**.
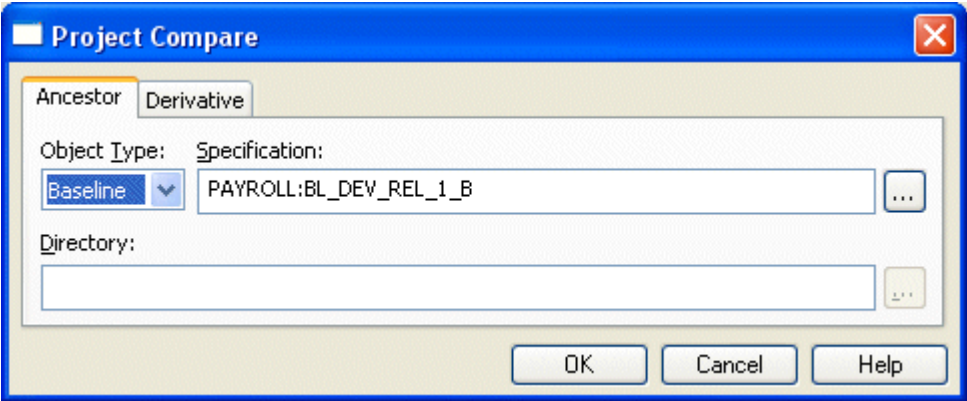
3   To specify the ancestor, do one of the following:

- In the **Specification** field, type a workset or baseline specification, or click Browse to find a workset or a baseline.

- In the **Directory** field, type a directory name, or click Browse to find a directory.

4 To specify the derivative, click the Derivative tab, and do one of the following:

- In the **Specification** field, type a workset or baseline specification, or click Browse to find a workset or a baseline.

- In the **Directory** field, type a directory name or click Browse to select a directory.

5 Click OK.

To start Project Merge Tool from the Windows command line:

1 Start the Dimensions desktop client or SCC (Source Code Control).

2 Select Start | Run.

3 In the Run dialog box, type one of the following:

- `projectmerge` *`ancestor_dir derivative_dir`*

  where:

  `ancestor_dir` is the name of the ancestor directory.

  `derivative_dir` is the name of the derivative directory.

- `projectmerge -config` *`file`*

  where *`file`* is the name of the configuration file. For more information, see "Creating Project Merge Configuration Files" on page 410.

- `projectmerge`

    In the Select Directories dialog box, type the directories you want to compare, or click Browse to find the directories. The first directory is the ancestor and the second directory is the derivative. You can only add one derivative directory.

4   Click OK.

The Project Merge Tool starts and you can compare the projects.

Overview of the Project merge Tool

About the Main Window

The various parts of the main window are described below.
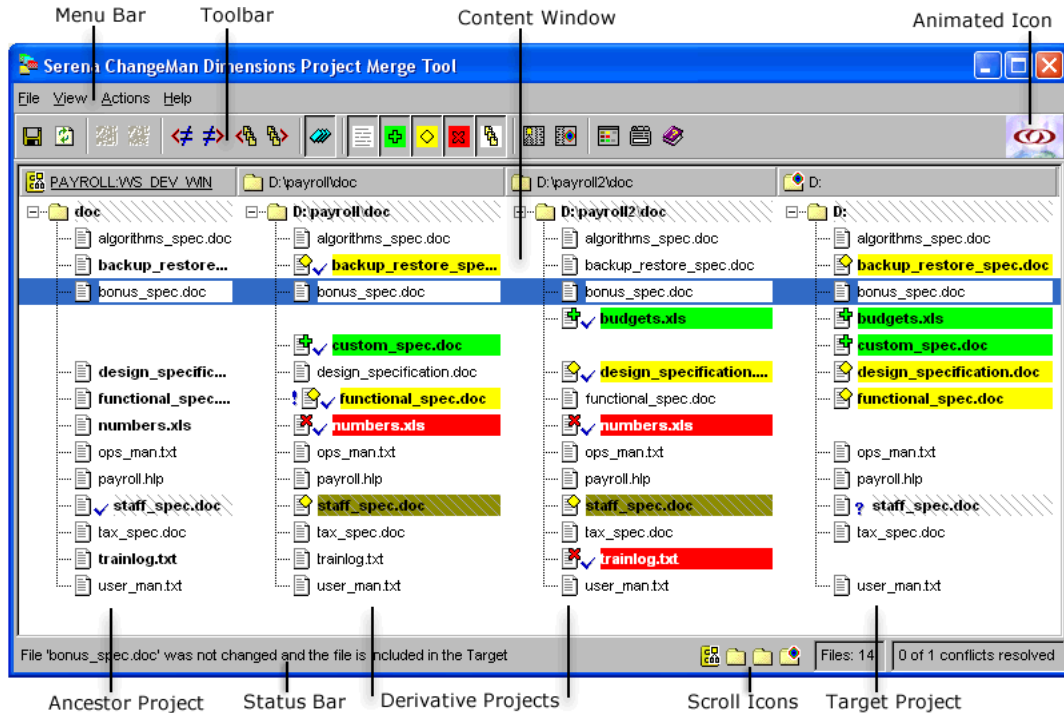
Menu bar. The menu bar contains menus with all of the Project Merge Tool commands.

Toolbar. The toolbar contains buttons for commonly used Project Merge Tool commands.

Content window. The content window shows the projects you want to compare or merge. The left column is the ancestor. If you are merging projects, the right column is the target. The columns

in between are derivatives. For more information, see "About the Content Window" on page 400.

Status bar. If an object is selected, the status bar shows information about the current ancestor, derivative, or target column and the differences on the selected row. If no objects are selected, it shows tooltips for the toolbar buttons. It also shows the number of files and the number of conflicts that are resolved.

Scroll icons. In the middle of the status bar are icons that scroll the content window to the ancestor, derivatives, and target columns.

Animated icon. When the icon rotates, it indicates the Project Merge Tool is busy. While the tool is busy, you can only navigate the main tree display.

Attribute columns. You can add columns of additional information about the item revisions in the Fields tab of the Options dialog box.

About the Content Window

The content window shows the projects you've selected to compare or merge in a multi-column tree.
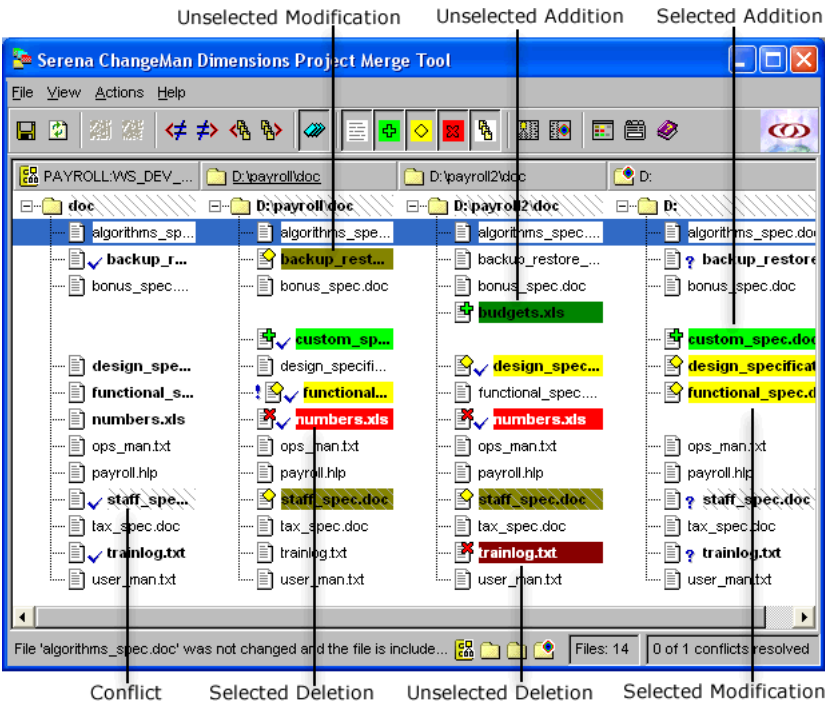
Colors help you identify the differences between files and which files are included in the target project. The following table shows the default colors.

This color	Indicates this
Bright Green	Selected addition. This object is included in the target.
Bright Yellow	Selected modification. This object is included in the target.
Bright Red	Selected deletions. This object is excluded from the target.

This color	Indicates this
Dark Green	Unselected additions. This object is excluded from the target.
Dark Yellow	Unselected modification. This object is excluded from the target.
Dark Red	Unselected deletions. This object is included in the target.
Grey	Unresolved conflicts of an indeterminate type. This shows only in the target.

Patterns help you identify conflicts. The following table shows the default patterns:

This pattern	Indicates this
Left-slanted diagonal lines	There is a conflict.
None	The conflict is resolved.

In the Options dialog box, you can customize these colors and patterns.

If you are merging projects, the target has the same directory and file structure as the ancestor. In addition, if **Auto Merge** is enabled, the target contains all files from the derivatives that are not in conflict with the ancestor. You enable **Auto Merge** in the Options dialog box.

A bold folder name indicates that its contents have been modified. A bold filename indicates the following:

■   In a derivative or target, the file differs from the ancestor.

■   In the ancestor, the file differs from one or more derivatives.

The following table shows icons that you see in the content window.

This icon	Indicates this
	New folder
	Deleted folder
	Unmodified file
	New file in the target
	New file in the derivative
	Deleted file
	Modified file
	Unresolved difference in the target
	Object in a derivative that has a timestamp previous to the same object in the ancestor
	Selected object included in the target

Using Shortcuts

Purpose

Use shortcuts to work more quickly. You can use the right-click menu for objects to quickly access the most common object commands. You can use the keyboard to access menu commands and to navigate through dialog boxes. You can also use keyboard shortcuts for common Project Merge Tool commands.

To access commands on right-click menus:

In a content window, right-click an object, and choose a command from the menu.

To access menu commands using the keyboard:

■ To access a menu command, hold down ALT and type the underlined letter in each menu and submenu for the command.

For example, to select Action | Select, press ALT+A+S.

■ To navigate a dialog box using the keyboard, press TAB to move to each control, or press ALT and type the underlined letter in the control name.

■ To access a command using a keyboard shortcut, type the shortcut from the following table.

Shortcut	Command
SPACE	Select or unselect an object
F1	Open the Project Merge Tool online help
F3	Move to the previous difference
F4	Move to the next difference
F5	Refresh the current window
F6	Move to the previous conflict
F7	Move to the next conflict
F9	Resolve the conflict
F10	Compare files
Ctrl+A	Dock the ancestor column
Ctrl+Shift+A	Select all objects
Ctrl+D	Dock the target column
Ctrl+O	Open the Options dialog box
Ctrl+S	Save the target project
Ctrl+T	Open the Color Tips dialog box
Ctrl+Shift+U	Unselect all objects
Ctrl+W	Open Wishlink™
Ctrl+X	Exit the Project Merge Tool

Merging Projects

About Resolving Conflicts

When merging projects, you must resolve all the conflicts before saving the target project. To resolve conflicts, you can do one of the following:

■ Manually select the item revisions in the derivative or ancestor that you want to include in the target project.

■ Start the Serena ChangeMan Merge Tool to resolve conflicts between the selected files.

About Upload Rules

When merging projects, you can upload files from a directory outside of the Dimensions database and preserve them in a Dimensions workset. In order to determine the design part, format, and item type for these new items, the Project Merge Tool uses the Dimensions upload rules.

Before saving a target workset, define the upload rules. For more information, see the Process Modeling User's Guide.

Merging Projects

Purpose   Merge projects to combine one or more *projects* into one project. A project is a set of item revisions in a directory, workset, or baseline.

To merge projects:

  1 In the Project Merge Tool content window, select an item revision or directory that is in conflict.

2   To resolve the conflict, do one of the following:

■   Select Actions | *<state>*

where *<state>* depends on the item or directory you have selected. For example, Select Modification or Select Addition.

■   Select Actions | Resolve Conflicts

Merge Tool starts and you can resolve conflicts between two files.

3   Repeat steps 1 and 2 until all conflicts are resolved and the target contains the correct files and directories.

4   If you have Auto Merge disabled, select all the non-conflicting files you want in the target.

5   Select File | Save Target.

Setting Options for the Project Merge Tool

You can configure the various options in the Project Merge Tool either by using the Options dialog box or by using a configuration file. These options set various preferences for the startup and display characteristics within the tool. Details of how to use a configuration file are described in "Creating Project Merge Configuration Files" on page 410.

Setting the General Options

Purpose   Set the General options to choose basic display and startup options.

To set the General options:

1   Select File | Options, click the 🖩 button, or press Ctrl+O.

2 Select the General tab.

3 Set the required options as described in the following:

- **To change the font used in the main display,** click the Font button, select a font, font style and size from the lists, and click OK.

- **To change the background bitmap for the main window,** click the browse button: ... and select a .bmp file from you work area. Leave this field blank if you do not require a bitmap.

- **To have all non-conflicting changes inserted in the target automatically,** select **Auto Merge**. If this is not selected you will have to manually select all changes.

- **To have the Ancestor tree expanded on startup,** select **Expand Whole Tree**.

- **To restore all window positions on startup,** select **Restore Window Positions**.

Setting the Colors

Purpose   Set the Color options to determine the colors and patterns used to identify the differences between projects.

To set the Color options:

1 Select File | Options, click the ⌨ button, or press Ctrl+O.

2 Select the Colors tab.

3 Set the required options as described in the following:

- **To locate the type of difference**, use the section headed Addition, Deletion, or Modification.

■ **To set the Unselected color,** use the left pair of buttons. This will determine the color that indicates that the difference is not yet included in the target.

■ **To set the Selected color,** use the left pair of buttons. This will determine the color that indicates that the line has been selected for the target file.

■ **To set a background color,** click the left button of the pair.

■ **To set a text color,** click the right button of the pair.

To set a color:

1 Click the button corresponding to the color you want to change.

2 Select the required color from the color palette.

3 If you want to further customize the color, click the Define Custom Colors button:
Define Custom Colors >>

■ Set the color either by entering values in the **Hue, Sat, Lum, Red, Green** and **Blue** fields or dragging the arrow key in the color scrollbar. The color will be displayed in the **Color|Solid** box.

■ Click the Add to Custom Colors button:

Add to Custom Colors

to add the color to **Custom colors** box

4 When you have chosen the color, click OK. You will be returned to the Colors tab and the color of the selected button will have changed.

To set the other options on the Colours tab:

■ **To choose the pattern for conflicts,** choose a pattern from the corresponding list under Resolved or Unesolved. This pattern will appear as a background against the file.

■ **To choose whether to use colors for differences**, select or deselect the option **Use colors to indicate differences**.

■ **To choose whether to use colors for selection**, select or deselect the option **Use colors to indicate selection**.

Choosing the Fields to Display

Purpose
Choose the fields to display when you want to see various attributes displayed against each file in the main window.

To choose the fields to display:

1   Select File | Options, click the 📇 button, or press Ctrl+O.

2   Select the Fields tab.
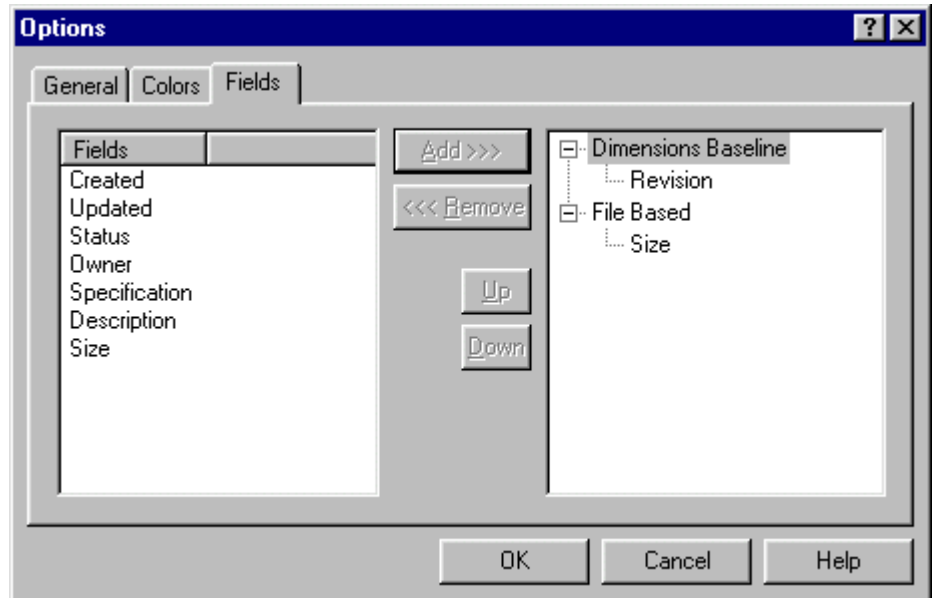
3 Select the type of object in the right-hand window for which you want to select the fields. The available attributes will be displayed in the left-hand window.

4 Do one of the following:

■ To add a field select the attribute in the left-hand window and click the Add button.

■ To remove a field, select it in the right-hand window and click the Remove button.

■ To change the order in which the field is displayed, select the field in the right-hand window and click the Up button to move it up in the list, or the Down button to move it down.

5 When you have finished, click OK.

Creating Project Merge Configuration Files

About Project Merge Configuration Files

Use a merge configuration file to control merge options when merging projects from the command line. You specify a merge configuration file as the argument to the `projectmerge` command.

The following example configuration file starts the Project Merge Tool with an ancestor which is a Dimensions workset, and a derivative which is a directory. The target is a Dimensions workset.

```
[General]
IsMerge=1
NumDerivatives=1
```

```
[Derivative1]
Provider=FileProvider.dll
[Attributes1]
Path=c:\fs\work\src\forms

[Ancestor]
Provider=WsetProvider.dll
[AncestorAttributes]
Connection = "my connection"
Specification=FS:FLIGHT_SIM_WS1
Path=src\forms

[Target]
Provider=WsetProvider.dll
[TargetAttributes]
Connection = "my connection"
Specification=FS:NEW_FLIGHT_WS
Description="New WorkSet to be created by the Merge Tool"
Path=src\forms
IsBranch=0
ValidBranches=maint,dev2
```

About Configuration File Syntax

The configuration file has four sections:

■   General

■   Derivative

■   Ancestor

■   Target.

Each section contains a series of name value pairs which direct the startup of the Project Merge Tool. Each configuration file section is described in greater detail in the following sections.

General Section

There must be one General section in the file. This section specifies values that affect the tool as a whole.

Option	Value
[**General**]	This is the section name.
	Required.
NumDerivatives	Indicate the number of Derivative sections in this file.
	Required.
IsMerge	Start the Project Merge Tool to compare projects or merge them.
	To compare projects, use **0**.
	To merge projects, use **1**.
	The default value is **0**.
AutoMerge	Resolve differences automatically at startup.
	Do not set this option if IsMerge is set to zero.
	To disable automatic merge, use **0**.
	To enable automatic merge, use **1**.
	The default value is **0**.
ExpandAll	Indicates whether the Project Merge Tool expands the tree structure at startup.
	To collapse the tree, use **0**.
	To expand the tree, use **1**.
	The default value is **0**.
ShowAdditions	Show item revisions marked as additions.
	To not mark additions, use **0**.
	To mark additions, use **1**.
	The default value is **1**.

Option	Value
`ShowDeletions`	Show item revisions marked as deletions.
	To not mark deletions, use **0**.
	To mark deletions, use **1**.
	The default value is **1**.
`ShowModifications`	Show item revisions marked as modified.
	To not mark modifications, use **0**.
	To mark modifications, use **1**.
	The default value is **1**.
`ShowConflicts`	Show item revisions are in conflict with other files.
	To not mark conflicts, use **0**.
	To mark conflicts, use **1**.
	The default value is **1**.

Derivative, Ancestor, and Target Sections

The Derivative, Ancestor, and Target sections have the same structure:

```
[Section_name]
provider=value
```

There must be one Ancestor section.

The number of Derivative sections must agree with what is specified by the `NumDerivatives` option in the General section.

If you include a Target section, the `IsMerge` option in the General section must be set to **1**.

Option	Value
[*Section_name*]	*Section_name* must be one of the following: ■ **Ancestor** ■ **Target** ■ **Derivative#** # is a number from 1 up to the value specified by the `NumDerivatives` option in the General section. Required.

Provider	The name of the library file that supports the project type. Values are:
	
	■ **WsetProvider.dll**
	
	  Use this value for a workset.
	
	■ **BlnProvider.dll**
	
	  Use this value for a baseline.
	
	■ **FileProvider.dll**
	
	  Use this value for a directory.
	
	Required.

Attributes Section

Each Derivative, Ancestor, and Target section requires an Attributes section. The Attributes section lists all the options and values specific to the provider.

The Attributes section must immediately follow the section to which it applies. For example:

```
[Ancestor]
provider=WsetProvider.dll
[AncestorAttributes]
...

[Derivative1]
provider=WsetProvider.dll
[Derivative1Attributes]
...
```

Option	Value
[*Section_name*]	*Section_name* must be one of the following: ■ **AncestorAttributes** ■ **TargetAttributes** ■ **Derivative#Attributes** # is a number from 1 up to the value specified by the `NumDerivatives` option in the General section. Required.
`Path`	For directories, the full path to the directory you want to compare or merge. You can use UNC specifications. For worksets or baselines, the relative path within the workset or baseline from which to begin the compare or merge operation.

Option	Value
`Connection`	The database connection string. This is the same information used in the Dimensions Login dialog box.
	For baselines or worksets only.
`Specification`	The Dimensions specification of the object to compare or merge:
	productID:*baselineID*
	productID:*worksetID*
	For baselines or worksets only.
The following options are used only in Target sections.	
`Description`	Description of the new workset.
	For worksets only.
`IsBranch`	Indicates whether the new workset is a branch or a trunk.
	Use 1 for a branch, use 0 for a trunk.
	For worksets only.
`Valid Branches`	List the valid named branches in the new workset. Use commas to separate branches.
	For worksets only.

13 Miscellaneous Functions

In this Chapter

About ChangeMan Builder

Serena ChangeMan Builder for Dimensions enables you to build applications from within Dimensions. A build is normally a series of compilations and links that create a final application ready for testing, or deployment into production. ChangeMan Builder offers advanced client/server build capabilities for heterogeneous platforms including Windows, UNIX, Linux and z/OS in a consistent and symmetrical manner. ChangeMan Builder integrates tightly with Dimensions to perform builds as part of normal Dimensions change management and as controlled, manual builds.

Dimensions enables you to invoke ChangeMan Builder operations for items, build projects, and baselines from within the desktop client or web client.

ChangeMan Builder for Dimensions is a separately licensed and installed product. For more details see the *Serena ChangeMan Builder for Dimensions User's Guide*.
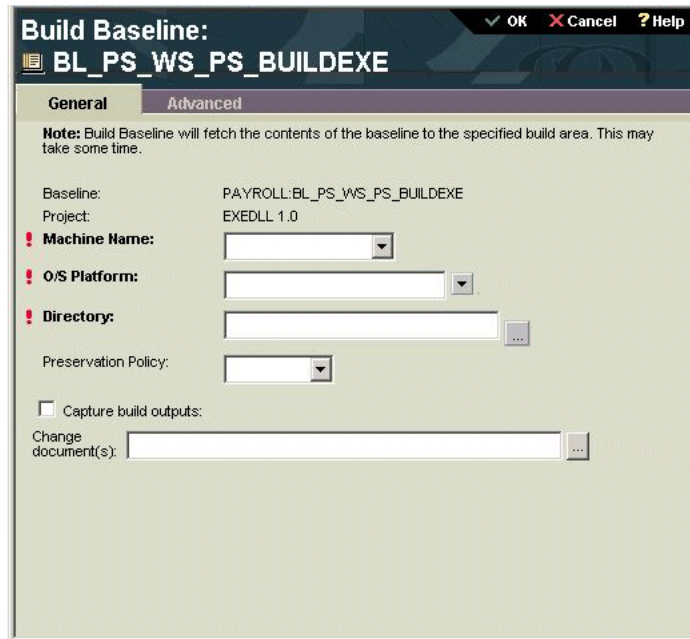
Building a Baseline

Purpose   Use this operation when you want to build a baseline.

Permissions   To perform build operations you must have the required role on the top-level design part. For example, to build at the UNIT TEST stage, you must have the UT-BUILDER role.

To be able to invoke ChangeMan Builder for a baseline, it must have been created from a workset with an associated build project.

Web client   **To build a baseline:**

1   In the content area of the Baselines tab, or the Pending tab with Baselines selected, select the baseline that you want to build.

2   Click the Build button: 📊 and choose Build Baseline.

3   From the **Machine name** list, choose a network node that hosts the build area.

4   From the **O/S Platform** list, choose the platform for which targets are to be built.

5   For **Directory,** do one of the following:

  ■   Enter the path, or High Level Qualifier (on a mainframe), of the build area.

  ■   Click the Browse button and navigate to the build area.

6   Optionally, choose a **Preservation Policy** from the list to determine how the targets are to be preserved in Dimensions.

7   If you require outputs from the build to be captured in Dimensions, select **Capture build outputs**.

8   Enter any **Change Document(s)** that you require to be related to the items that Dimensions will create as a result of capturing the build outputs.

9   Click the **Advanced** tab if you require any special build and make options, or one-off overrides.

10   Choose one of the following compiler options:

  ■ **Debug**: selects the debug compiler option (produces various diagnostic listings).

  ■ **Release**: selects the release compiler option.

11   Optionally, for **OM options, BLDMAKE options**, and **Template parameters**, enter any further build command options required. For details of the available options and their formats, see the *Serena ChangeMan Builder Developer Guide* or the *Serena ChangeMan Builder z/OS Developer Guide* on the Serena ChangeMan Builder distribution media.

12   To build the baseline, click the OK button. The command is submitted to ChangeMan Builder, and a browser window opens and displays information about the progress of the build.

Desktop client   **To build a baseline:**

1   Select the baseline.

2   Select Baseline | Build.

3   In the **Baseline** and **Project** fields, verify the specification of the baseline you have selected and its associated project.

4   From the **Machine Name** list, choose a Dimensions network node that hosts the build area.

5   From the **O/S Platform** list, choose the platform for which targets are to be built.

6   For **Directory**, do one of the following:

   ■   Enter the path, or High Level Qualifier (on a mainframe), of the build area.

   ■   Click the Browse button and navigate to the build area.

7   Optionally, choose a **Preservation Policy** from the list to determine how the targets are to be preserved in Dimensions.

8   If you require outputs from the build to be captured in
    Dimensions, (this is not available for Development builds)
    select **Capture build outputs**.

9   Enter any **Change Document(s)** that you require to be related
    to the items that Dimensions will create as a result of
    capturing the build outputs.

10 Click the **Advanced** tab if you require any special build and
    make options, or one-off overrides.

11 For **Build options**, choose one of the following compiler
    options:

    ■ **Debug build**: selects the *debug* compiler option (produces
      various diagnostic listings).

    ■ **Release build**. selects the *release* compiler option.

12 Optionally, for **OM options**, **BLDMAKE options**, and **Template
    parameters**, enter any further build command options
    required. For details of the available options and their
    formats, see the *Serena ChangeMan Builder Developer Guide*
    or the *Serena ChangeMan Builder z/OS Developer Guide* on
    the Serena ChangeMan Builder distribution media.

13 To build the baseline, click the OK button. The command is
    submitted to ChangeMan Builder, and a browser window
    opens and displays information about the progress of the
    build.

Building an Item

Purpose   Use this operation when you want to build an item.

Permissions   To perform build operations you must have the required role on
                 the top-level design part. For example, to build at the UNIT TEST
                 stage, you must have the UT-BUILDER role.

To perform a build for the Development build stage, either:

■ the project must be specified as *First Stage Managed*, and Development build areas must be defined,

   or

■ the workset root directory must be a tertiary node.

Web client   **To build an item:**

   1   In the content area of the Item tab, or the Pending tab with Items selected, select the item that you want to build.

   2   Click the Build button: and choose Build Item.
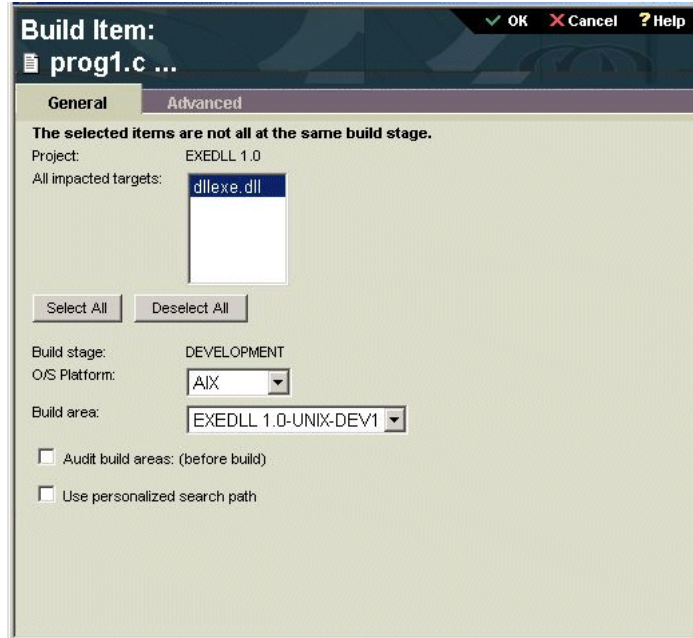
The Build Item dialog opens and displays the name of the current project. If you have selected a single item, and there is no build stage associated with the item's lifecycle state, an error dialog box will appear instead.

> **NOTE** If you have selected more than one item revision, and they are different build stages, a warning at the top of the dialog box will inform you of this. The build stage in this case will be set to the lowest build stage of all the selected item revisions to ensure that the appropriate versions of all the items are built.

3   In the **All impacted targets** list, deselect any targets you do not want to be built. You can also use the **Select All** and **Deselect All** buttons for this. (There must be at least one target selected.)

4   From the **O/S Platform** list, choose the platform for which targets are to be built.

5   From the **Build area** list, choose the area where you want the build to compile. To build all the areas associated with a build stage, choose – *all build areas* – (not available for Development builds).

6   If you require outputs from the build to be captured in Dimensions, select **Capture build outputs**. (This option is not available for Development builds.)

7   Enter any **Change Document(s)** that you require to be related to the items that Dimensions will create as a result of capturing the build outputs. (This option is not available for Development builds.)

8   To perform an audit, select the **Audit build areas** check box. This option checks that the files in the repository are the same as those in the build area. If they are not synchronized, Dimensions produces an error message and does not proceed with the build. (This option is not available if the build area is your workset root directory.)

9   If this is a Development build stage, optionally select **Use personalized search path** to use the personalized search path for the build area.

10   Click the **Advanced** tab if you require any special build and make options, or one-off overrides.

11   Choose one of the following compiler options:

   ■ **Debug**: selects the *debug* compiler option (produces various diagnostic listings).

   ■ **Release**: selects the *release* compiler option.

12   Optionally, for **OM options**, **BLDMAKE options**, and **Template parameters**, enter any further build command options required. For details of the available options and their formats, see the *Serena ChangeMan Builder Developer Guide* or the *Serena ChangeMan Builder z/OS Developer Guide* on the Serena ChangeMan Builder distribution media.

13   To build the item, click the OK button. The command is submitted to ChangeMan Builder, and a browser window opens and displays information about the progress of the build.

Desktop client   **To build an item or items:**

1   Select the item revision(s) that you want to build.

2   Select Item | Build.
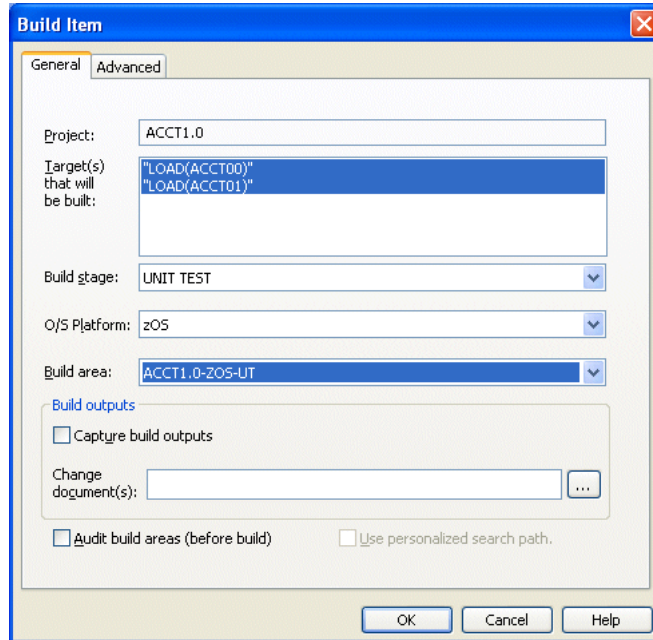
If you have selected a single item, and there is no build stage associated with the item's lifecycle state, an error dialog box will appear instead.

NOTE If you have selected more than one item revision, and they are different build stages, the build stage will be set to the lowest build stage of all the selected item revisions to ensure that the appropriate versions of all the items are built.

---

3   In the **All impacted targets** list, deselect any targets you do not want to be built. (There must be at least one target selected.)

4   From the **O/S Platform** list, choose the platform for which targets are to be built.

5   From the **Build area** list, choose the area where you want the build to compile. To build all the areas associated with a

build stage, choose *--all build areas--* (not available for Development builds).

6   If you require outputs from the build to be captured in Dimensions, (this is not available for Development builds) select **Capture build outputs**.

7   Enter any **Change Document(s)** that you require to be related to the items that Dimensions will create as a result of capturing the build outputs.

8   To perform an audit, select the **Audit build areas** check box. This option checks that the files in the repository are the same as those in the build area. If they are not synchronized, Dimensions produces an error message and does not proceed with the build. (This option is not available if the build area is your workset root directory.)

9   If this is a Development build stage, optionally select **Use personalized search path** to use the personalized search path for the build area.

10   Click the **Advanced** tab if you require any special build and make options, or one-off overrides.

11   For **Build options**, choose one of the following compiler options:

   ■ **Debug build**: selects the *debug* compiler option (produces various diagnostic listings).

   ■ **Release build**. selects the *release* compiler option.

12   Optionally, for **OM options**, **BLDMAKE options,** and **Template parameters,** enter any further build command options required. For details of the available options and their formats, see the *Serena ChangeMan Builder Developer Guide* or the *Serena ChangeMan Builder z/OS Developer Guide* on the Serena ChangeMan Builder distribution media.

13   To build the item(s), click the OK button. The command is
       submitted to ChangeMan Builder, and a browser window
       opens and displays information about the progress of the
       build.

Viewing the Impacted Targets of Items

Purpose   Use this operation when you want to see which targets would be
                     built for one or more items.

Permissions   No permissions required.

Web client   **To view the impacted targets of items:**

1   In the content area of the Item tab, or the Pending tab with
    Items selected, select the item(s) for which you want to view
    the targets.

2   Click the Build button: and choose Show Impacted
    Targets.

    The Show Impacted Targets dialog box appears showing you
    the name of the project and all the affected targets for the
    item(s) you have selected.

    If you have selected multiple items at different build stages, a
    warning message will appear at the top of the dialog box.

Desktop client   **To view the impacted targets for items:**

1   Select the item revision(s) for which you want to view the
    targets.

2   Select Build | Impacted Targets

    The Show Impacted Targets dialog box appears showing you
    the name of the project and all the affected targets for the
    item(s) you have selected.

If you have selected multiple items at different build stages, a warning message will appear at the top of the dialog box.

Building a Project

Purpose
Use this operation when you want to build a project.

Permissions
To perform build operations you must have the required role on the top-level design part. For example, to build at the UNIT TEST stage, you must have the UT-BUILDER role.

Web client
To build a project:

   1 Check that your current workset is associated with the project that you want to build.

2 In the content area of the Items or Baselines tab, or the Pending tab with Items or Baselines selected, click the Build button: and choose Build Project.

3 From the **Stage** list, choose a build stage.

NOTE The Development build stage can only be selected if either the project is specified as *First Stage Managed*, and Development build areas are defined, or if the workset root directory is a tertiary node.

---

4 From the **O/S Platform** list, choose the platform for which targets are to be built.

5 From the **Build area** list, choose the area where you want the build to compile. To build all the areas associated with a build stage, choose – *all build areas* – (not available for Development builds).

6   If you require outputs from the build to be captured in Dimensions, select **Capture build outputs**. (This option is not available for Development builds.)

7   Enter any **Change Document(s)** that you require to be related to the items that Dimensions will create as a result of capturing the build outputs. (This option is not available for Development builds.)

8   To perform an audit, select the **Audit build areas** check box. This option checks that the files in the repository are the same as those in the build area. If they are not synchronized, Dimensions produces an error message and does not proceed with the build. (This option is not available if the build area is your workset root directory.)

9   If this is a Development build stage, optionally select **Use personalized search path** to use the personalized search path for the build area.

10 Click the **Advanced** tab if you require any special build and make options, or one-off overrides.

11 Choose one of the following compiler options:

■ **Debug**: selects the *debug* compiler option (produces various diagnostic listings).

■ **Release**: selects the *release* compiler option.

12 Optionally, for **OM options**, **BLDMAKE options**, and **Template parameters**, enter any further build command options required. For details of the available options and their formats, see the *Serena ChangeMan Builder Developer Guide* or the *Serena ChangeMan Builder z/OS Developer Guide* on the Serena ChangeMan Builder distribution media.

13 To build the project, click the OK button. The command is submitted to ChangeMan Builder, and a browser window opens and displays information about the progress of the build.

Desktop client

To build a project:

1 Check that your current workset is associated with the project you want to build. If not, choose Workset | Change, or click the Change Workset button: 🔲 , and select the workset.

2 Select Build | Project.
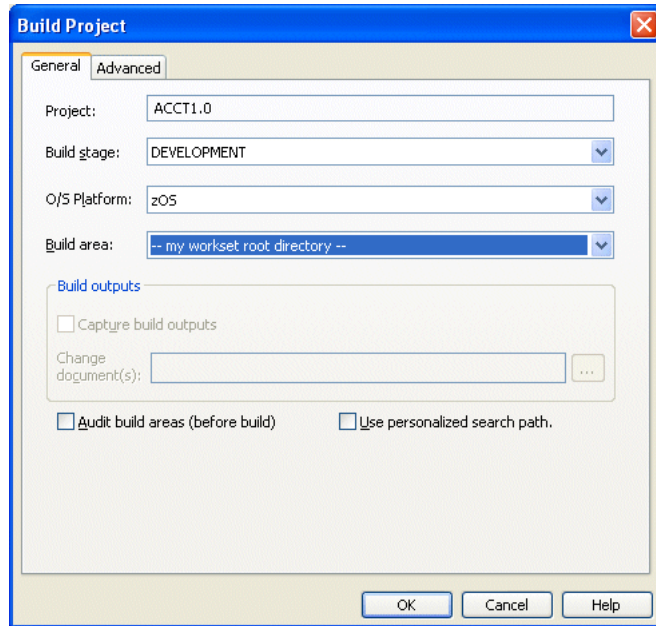
The Build Project dialog opens and the **Project** field displays the name of the project you are going to build.

3 From the **Stage** list, choose a build stage for the project.

NOTE The Development build stage can only be selected if either the project is specified as *First Stage Managed*, and Development build areas are defined, or if the workset root directory is a tertiary node.

---

4 From the **O/S Platform** list, choose the platform for which targets are to be built.

5   From the **Build area** list, choose the area where you want the build to compile. To build all the areas associated with a build stage, choose *--all build areas--* (not available for Development builds).

6   If you require outputs from the build to be captured in Dimensions, (this is not available for Development builds) select **Capture build outputs**. (This option is not available for Development builds.)

7   Enter any **Change Document(s)** that you require to be related to the items that Dimensions will create as a result of capturing the build outputs. (This option is not available for Development builds.)

8   To perform an audit, select the **Audit build areas** check box. This option checks that the files in the repository are the same as those in the build area. If they are not synchronized, Dimensions produces an error message and does not proceed with the build. (This option is not available if the build area is your workset root directory.)

9   If this is a Development build stage, optionally select **Use personalized search path** to use the personalized search path for the build area.

10   Click the **Advanced** tab if you require any special build and make options, or one-off overrides.

11   For **Build options**, choose one of the following compiler options:

■   **Debug build**: selects the *debug* compiler option (produces various diagnostic listings).

■   **Release build**. selects the *release* compiler option.

12   Optionally, for **OM options**, **BLDMAKE options**, and **Template parameters**, enter any further build command options required. For details of the available options and their formats, see the *Serena ChangeMan Builder Developer Guide*

or the *Serena ChangeMan Builder z/OS Developer Guide* on the Serena ChangeMan Builder distribution media.

13 To build the project, click the OK button. The command is submitted to ChangeMan Builder, and a browser window opens and displays information about the progress of the build.

Auditing a ChangeMan Builder Project

Purpose

You use this operation to produce an audit report for a selected project. The report compares the files in the repository with those in the selected build area(s) for a build stage.

Permissions

To perform build operations you must have the required role on the top-level design part. For example, to build at the UNIT TEST stage, you must have the UT-BUILDER role.

To audit a Development build stage the project must be specified as *First Stage Managed*, and Development build areas must be defined,

You cannot peform an audit if the build area is your workset root directory.

Web client   **To audit a build project:**

    1 In the content area of the Item tab or Baselines tab, or the Pending tab with Items selected, click the Build button: and choose Audit Project.
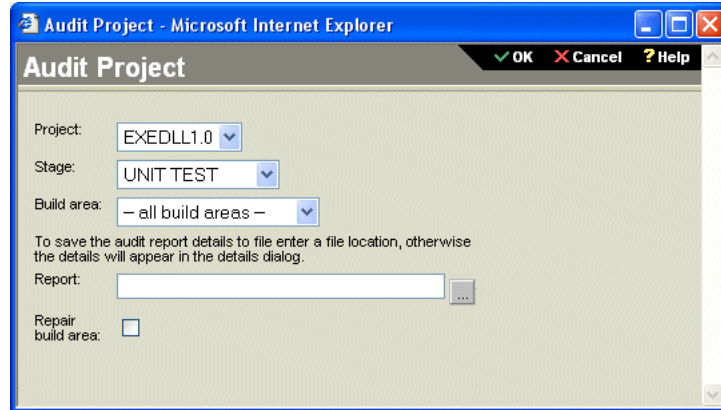
    2 From the **Project** list, choose a Dimensions project.

    3 From the **Stage** list, choose a build stage for the audit.

    4 From **Build area** list, choose a build area to be audited. To audit all build areas, choose – *all build areas* – (not available for Development build areas)*.*

    5 In the **Report file** field, enter the path and filename of the file to contain the report, or click the Browse button and select it.

    6 Select **Repair build area** if you want to reset the build area so that it contains all item revisions from the development workset that are at the specified build stage.

    7 To run the audit, click the OK button.

Desktop client   **To audit a build project:**

    1 Select Build | Audit Project. The Audit Project dialog opens.

2   From the **Project** list, choose a Dimensions project.

3   From the **Stage** list, choose a build stage for the audit.

4   In the **Build area** list, choose a build area to be audited. To audit all build areas, choose *--all build areas--* (not available for Development build areas)*.*

5   In the **Report file** field, enter the path and filename of the file to contain the report, or click the Browse button and select it.

6   Select **Repair build area** if you want to reset the build area so that it contains all item revisions from the development workset that are at the specified build stage.

7   To run the audit, click the OK button.

Invoking Automated Deployment Functions

Purpose   Use these operation when you wish to invoke automated deployment functions for a baseline.

Permissions   To use this facility, you must have Serena® ChangeMan® Mover™ installed. This is a separately licensed product. For more details, see the *Serena ChangeMan Mover Users Guide*.

You can invoke the automated deployment functions of Mover from the desktop client or the web client. Clicking the Deployment button takes you into the automated deployment tool. The actions you can perform are:

■   Run

■   Schedule

■   Setup.

Web client   **To invoke automated deployment:**

1 Do one of the following:

■ In the content area of the Baselines tab, or the Pending tab
  with Baselines selected, click the Deployment button:

■ In the content area of the Items tab, or the Pending tab
  with Items selected, click the More button: , and select
  Deployment.

The main window for Mover is displayed.

2 When you have finished, close the Mover main window to
   return to the Dimensions web client.

Desktop client   **To invoke automated deployment:**

1 Select Tools | Deployment.

The main window for Mover is displayed.

2 When you have finished, close the Mover main window to
   return to the Dimensions desktop client.

Running User Reports

Purpose   Run user reports when you want to obtain listings for various
               Dimensions objects or obtain statistical information from your
               base database.

               For more details on the reports you can request, or how to set up
               your own reports, see the Dimensions Reports Guide.

Web client   **To run a report:**

1 Do one of the following:

■ In the Change Docs tab, or the Pending tab with Change Docs selected, click the Run User Report button:

Run User Report

■ In the Items tab, or the Pending tab with Items selected, click the More button: and select Run User Report.

2 For **Scope**, select the area of Dimensions to which the report applies, or select All Reports**.**

3 For **Report**, select the name of the report you want to run. The available reports in the list are those that have been set up in the User Reports Administration section of the Administration Console.

4 For **Product**, select the product in the base database against which you want to run the report.

5 In the **Output Filename** field**,** type the pathname of the file to contain the report, or click the browse button: to select it.

6 Click the Next button.

7 In the second page of the wizard, enter the required values for the parameters, if any.

8 Click the Finish button.

Desktop client   **To run a report:**

1 Select Tools | Reports | Run User Reports.

2 For **Scope**, select the area of Dimensions to which the report applies, or select All Reports.

3 For **Report**, select the name of the report you want to run. The available reports in the list are those that have been set up in the User Reports Administration section of the Administration Console.

4 For **Product**, select the product in the base database against which you want to run the report.

5 In the **Output Filename** field, type the pathname of the file to contain the report, or click the browse button: ... to select it.

6 In the Parameters tab, enter the required values for any parameters that are present.

7 Click the OK button.

Accessing the Crystal Report Designer

Purpose   Access the Crystal report designer when you want to create your own reports for reporting against the data in your process model.

For more details on using this feature, see the online help in the Crystal Reports desktop.

To access Crystal Reports:

1 Select Tools | Reports | Crystal Reports.

The Crystal Reports desktop will be launched.

2   Refer to the online help for assistance when using this tool.

14 Customization of the Desktop Client

In this Chapter

Introduction

The purpose of this chapter is to describe how the desktop client's interface and behavior can be customized. The areas in which this can be done are:

■   Setting system preferences

■   Customizing the content windows

■   Customizing the menus and toolbars

■   Creating custom tools

■   Customizing the starting of the desktop client.

A more detailed description of how to define and configure custom tools is described in Appendix A: "Using Custom Tools in the Desktop Client".

Setting System Preferences

System Preferences determine various aspects of the behavior of the desktop client. These preferences are organized into the following groups:

■   Configuration

■   Display Fonts

■   Editors

■   Associations

■   Miscellaneous

■   User Interface.

NOTE Any changes to current settings will only be applied to the desktop client once you have clicked OK. If you click **Cancel**, any changes requested will be ignored. Some changes, where indicated, will not take effect until after you have closed down and restarted the desktop client.

Setting the Configuration Details

Purpose   Set the configuration details when you want to determine:

- **General** application settings: the root directory and cache limit for the desktop client

- **Temporary Path Locations**: folder locations for temporary files

- **Operation Properties**: how the client behaves when you perform various commands

- **Display Properties**: how the client displays in various situations.

Permissions   No permissions required.

To access the configuration details:

Select Tools | Preferences and make sure the Configuration tab is selected.
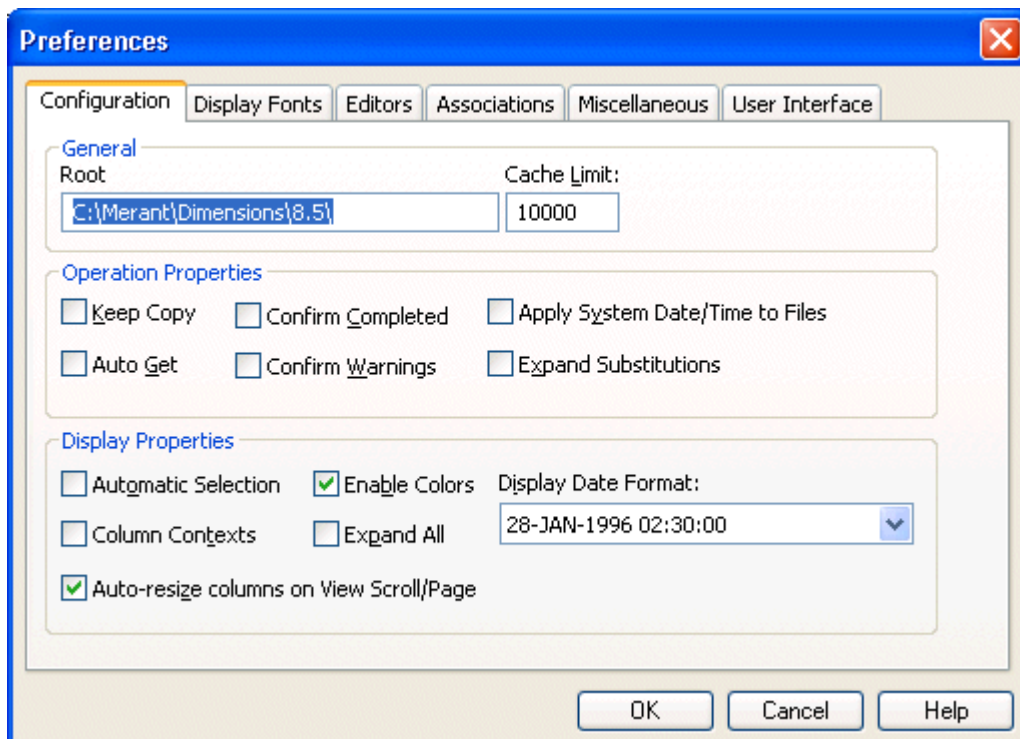
To change the installation directory:

Type the new location in the **Root Directory** field. This field contains the folder location where the desktop client is installed on your machine.

NOTE Any change in this value will not take effect until after you have closed down and restarted the desktop client.

To set the cache limit for Dimensions objects:

Type the value in the **Cache Limit** field.

Each Dimensions object (approximately 5K) displayed is allocated an amount of cache. The cache limit determines how many Dimensions objects the desktop client will hold in its cache before clearing the cache.

If you have a PC with a large amount of memory, you may want to increase the default value. The larger the cache the better the desktop client will perform, as it will not need to query information from the database as often.

NOTE Any change in this value will not take effect until after you have closed down and restarted the desktop client.

To set the temporary path locations:

■   For **Remote**, enter the path on the host machine for temporary files created under your user. Leave this empty if you want it to default to your user's home area (e.g. /dvl/home/usera).

■   For **Local,** enter the folder path for temporary files on your local PC.

    By default, this is set from the MS-DOS environmental variable TMP or TEMP when defined, otherwise it is set from your operating system 'temp' setting, which by default will be beneath your folder in either *C:\Documents and Settings* or *C:\My Documents*.

NOTE Any change in this value will not take effect until after you have closed down and restarted the desktop client.

To set the Operation Properties:

■   Set **Keep Copy** if you want the client to leave the copy of an item file in your user area after you have checked it in. (Note that you can override this setting when you use the Check In dialog box.)

- Set **Auto Get** if you want the client to automatically get a copy of an item file back into your user area after you have checked it in. (Note that you can override this setting when you use the Check In dialog box.)

- Set **Confirm Completed** if you want the client to display a dialog box indicating "Operation Successful" when you click OK and the command has completed successfully.

- Set **Confirm Warnings** if you want the client to display all warning messages in a popup window containing details of the warning, requiring you to click OK to continue.

- Set **Apply system date/time to files** if you want the client to set the timestamp of the file(s) in your working area to the current date and time after a Get or Check Out item operation.

- Set **Expand Substitutions** if you want item header substitution to occur in item commands such as Get Item and Check in Item. (Note that this setting can be overridden in the relevant dialog boxes.)

To set the Display Properties:

- Set **Automatic Selection** if you want an object to be displayed already selected when you open a new window display for that object (this behavior applies only when there is only one object in the left side Primary view). This means that the client will initially select the object and display its related objects on the right side. if this option is not set, when you open a new window for an object you need to select it in its Primary view before its related objects can be seen.

- The **Column Context** field is reserved for future use.

- Set **Enable Colors** if you want the Dimensions object entries in the various windows to appear in the color you have set in the Colors tab of the Customize dialog box. You set the colors for Phase and Status as described in "Customizing the Colors" on page 471. If you do not set this option, the client does not

display the colors, and shows selected grid rows by
highlighting them.

NOTE Always exit from the current display before disabling
colors – color combinations other than 'white on black' may
occur.

■ For **Display Date Format,** select the format in which you want
the client to display dates from the list of date formats.

■ Set **Expand All** if you want the client to display all revisions of
an item without the need to click the Expand All icon: at
the top right of the item list.

■ Set **Auto-resize columns on view/scroll page** if you want the
client to automatically resize the columns in grid views to
show the widest data field within the column when you scroll
through them. This means that you do not need to click the
Auto Resize icon: to activate this behavior.

Setting the Display Fonts

Purpose   Set the display fonts when you want to determine the font size
and style for the desktop client to use in its displays.

Permissions   No permissions required.

To set the display fonts:

Select Tools | Preferences and select the Display Fonts tab.
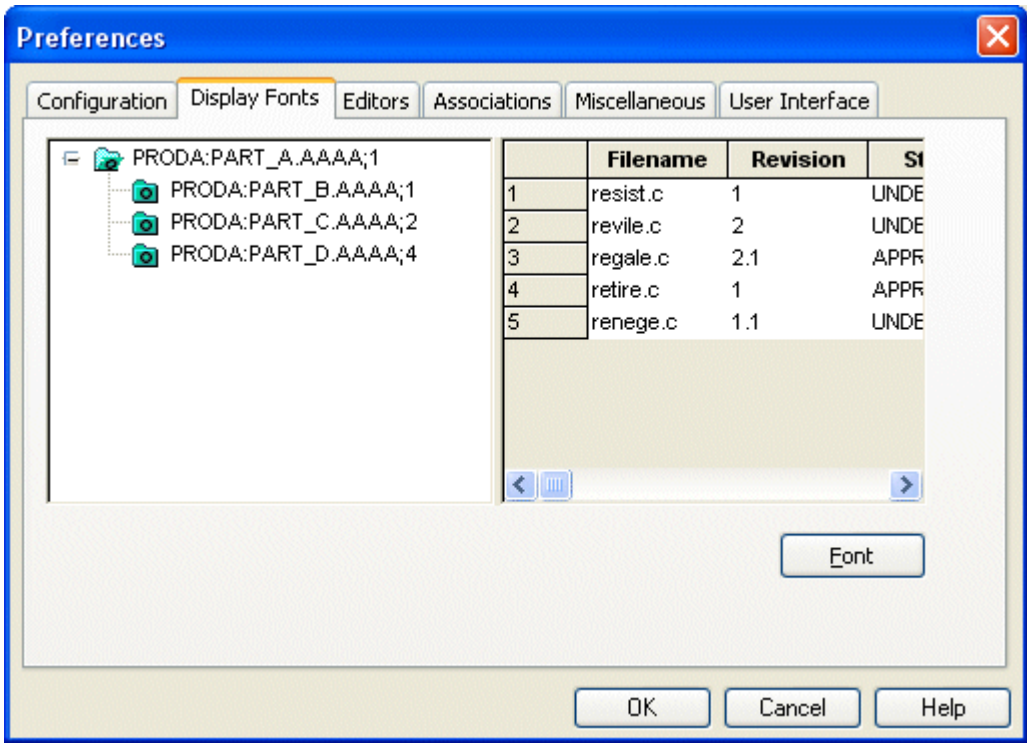
NOTE The partial tree structure and table view on this tab are not selectable – their purpose is to illustrate the visual impact of the current (and any newly assigned) fonts.

---

1   Click the **Font** button.
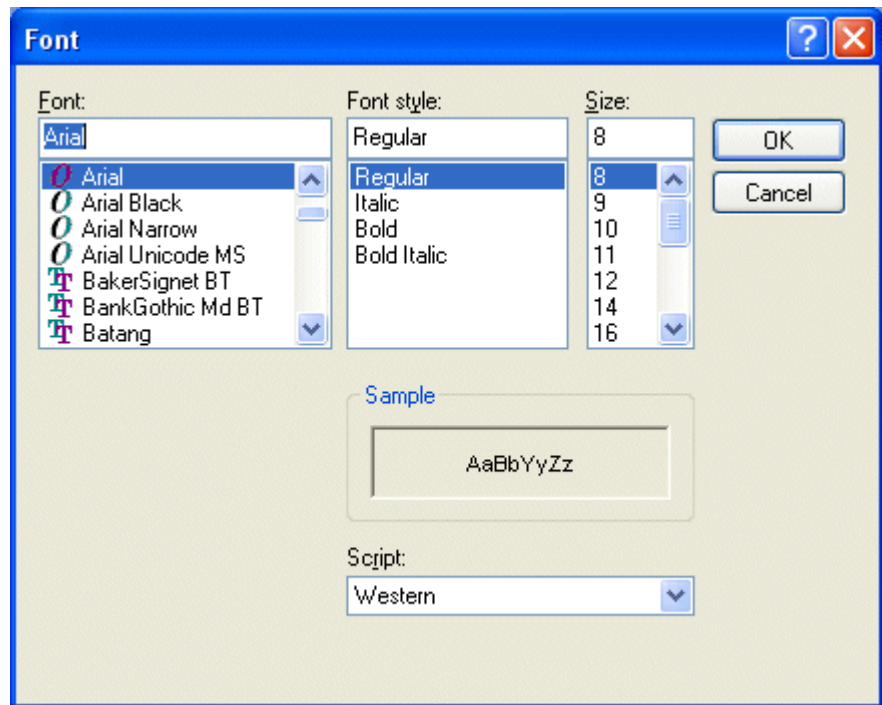
2   In the **Font** dialog box, select from the relevant list:

- A font from the **Font** list

- A style from the **Font Style** list

- The **Size** of the font

- A national language from the **Script** list (the languages available are entirely dependent on how you have configured Windows on your PC).

A sample view of the font chosen will be displayed in the **Sample** field.

3   Click OK to select the new font settings, dismiss the Font dialog and return to the Display Fonts tab.

> **4** Click OK on the Preferences dialog box to confirm the new font settings.

Assigning Editors

Purpose | Assign editors when you want to determine which editor the client will use to open a particular type of change document or item for browsing.

Permissions | No permissions required.

To access the editors for change documents:

1 Select Tools | Preferences and select the Editors tab.

2 Under **Category**, select **Change Documents.**
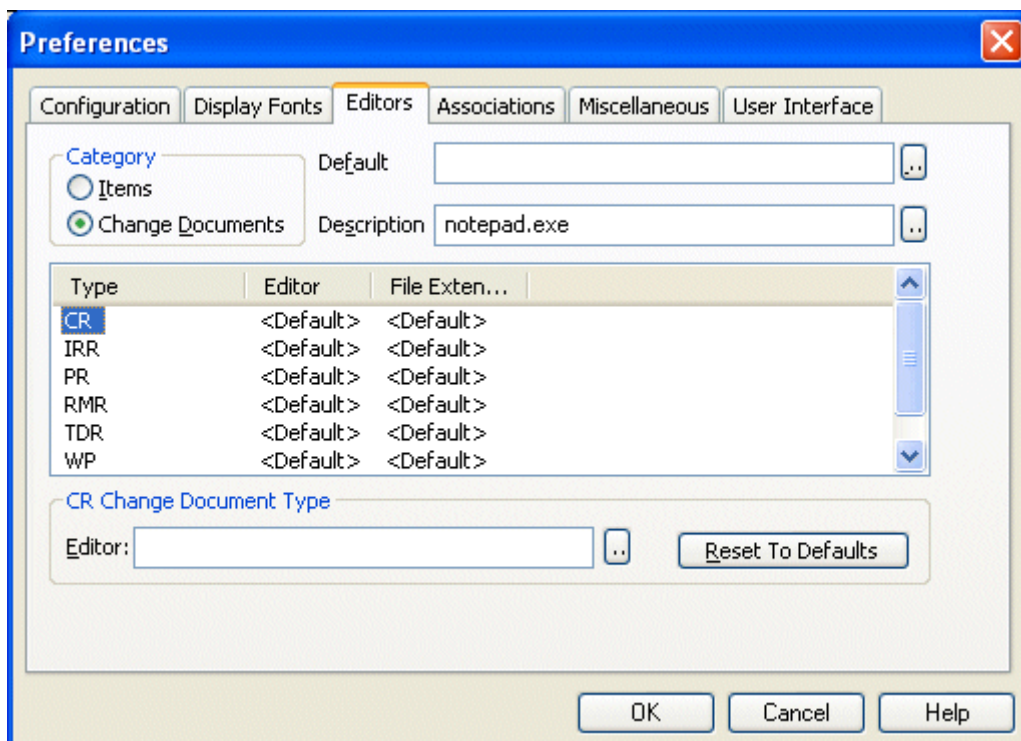
To select the default editor:

In the **Default** field, type the filename and path location of the application to be used, or use the browse button: ... to select it.

This is the editor that the client will use if one has not been specifically set for a particular change document type. It is recommended that you select a default editor otherwise you might receive an error message stating that "a default editor has not been set" when performing certain actions.

To select the description editor:

In the **Description** field, type the filename and path location of the application to be used, or use the browse button: ... to select it.

This is the editor that the client will use for you to edit the action descriptions and detailed descriptions of change documents.

To select an editor for a change document type:

1   Select the change document type in the **Type** field in the list.

2   In the **Editor** field, type the filename and path location of the application to be used, or use the browse button: ... to select it. If you want to unset the selected editor and use the default editor for this change document type, click the **Reset To Defaults** button.

3   Click OK to confirm the changes.

To access the editors for items:

1   Select Tools | Preferences and select the Editors tab.

2   Under **Category**, select **Items**.
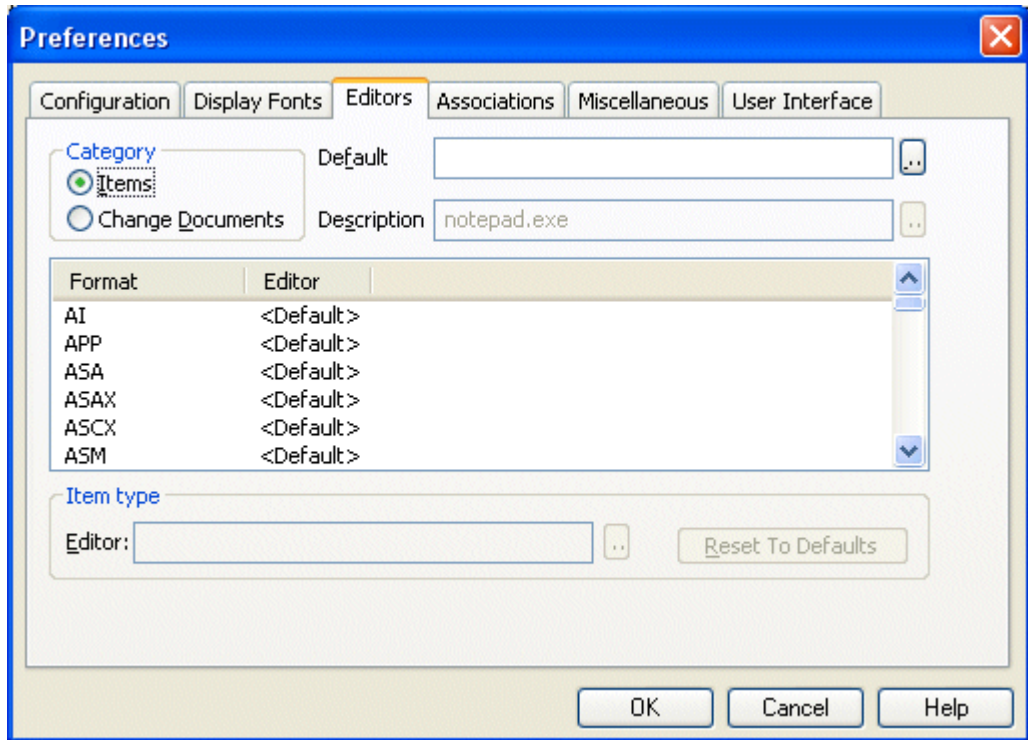
To select the default editor:

In the **Default** field, type the filename and path location of the application to be used, or use the browse button: [...] to select it.

This is the editor that the client will use if one has not been specifically set for a particular change document type. It is recommended that you select a default editor.

To select an editor for an item format:

1   Select the item format in the **Format** field in the list.

2   In the **Editor** field, type the filename and path location of the application to be used, or use the browse button: [...] to select it. If you want to unset the selected editor and use the

default editor for this item format, click the **Reset To Defaults** button.

3   Click OK to confirm the changes.

Setting Associations

Purpose

Set associations when you want to associate an item type with a particular file extension when creating items. For example, if you enter *build\src\main.c* as a workset filename and you have associated *c* with Item Type *SRC* in the Associations tab of the Preferences dialog box, item type *SRC* will be automatically chosen for the newly created item.

Permissions

No permissions required.

To access Associations:

Select Tools | Preferences and select the Associations tab.
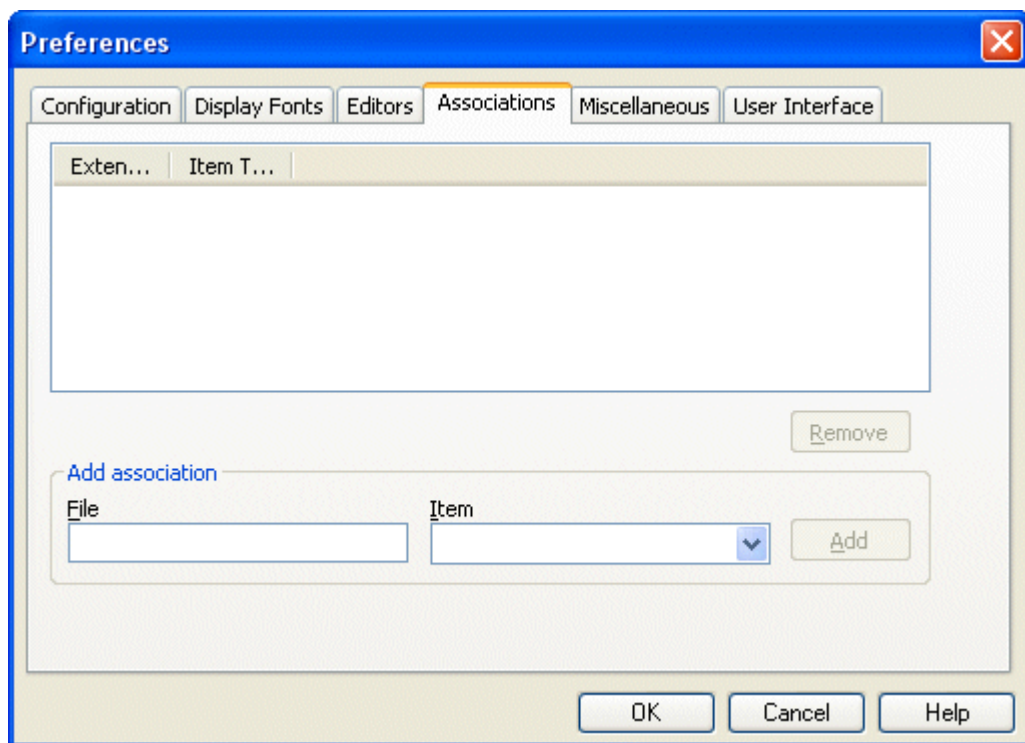
To add a new association:

1 Under **Add Association**

   ■ Enter the **File Extension** (e.g.) JAVA

   ■ Select the **Item Type** from the combo box list

2 Press **Add** to add the new association to the associations listed above.

To remove an existing association:

1 Select the required association in the list of associations.

2 Click the Remove button.

Setting the Miscellaneous Options

Purpose   Set the Miscellaneous options when you want to determine the behavior of the desktop client when you perform various actions.

Permissions   No permissions required.

To access Miscellaneous options:

Select Tools | Preferences and select the Miscellaneous tab.
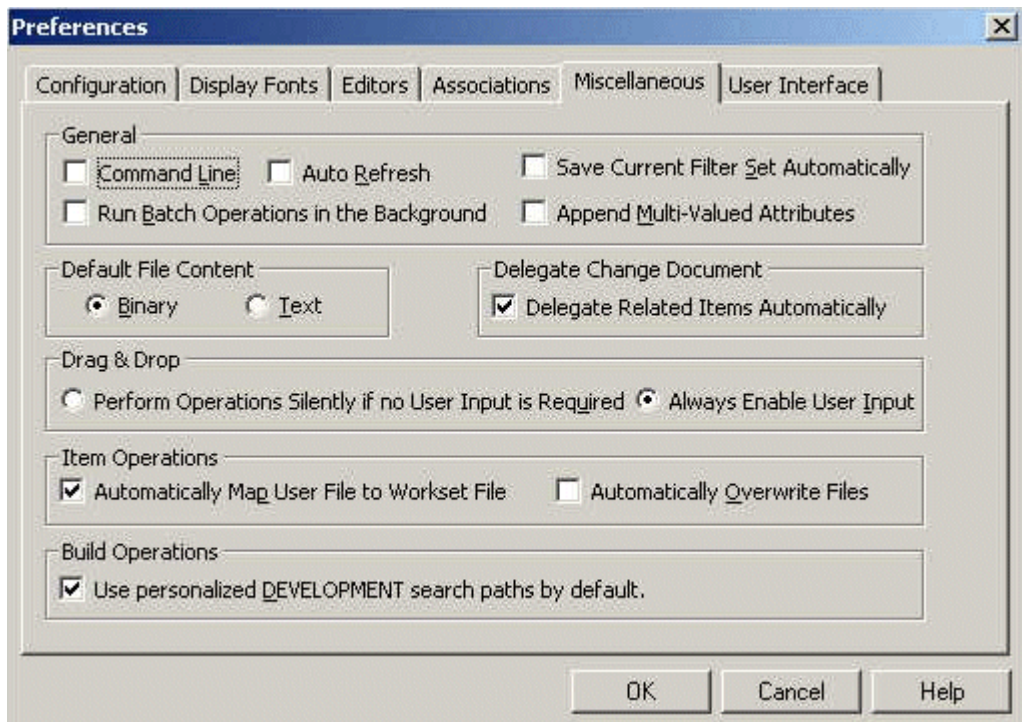
To set the General options:

■ **Command Line:** This option is from a prior version of the desktop client, and is no longer functional.

■ Set **Auto Refresh** if you want the client to refresh all the desktop client displays when a command line operation has been completed.

- Set **Save Current Filter Set** automatically if you want the client to retain the filter set you have selected when you click OK or the Find Now tab.

- **Run Batch Operations in the background:** This option is from a prior version of the desktop client, and is no longer functional.

- Set **Append Multi-Valued attributes** if you want values that you enter in multi-valued attributes to be added to the existing values. If you do not select this option, any values entered for a multi-valued attribute will completely replace the existing values each time you perform an edit.

To set the default in the Delegate Change Document dialog box to also delegate related items:

- Set **Delegate Related Items Automatically.** This means that when you delegate a change document, its related items will also be delegated by default. You will still be able to override this, however.

To determine when to display the Relationships dialog box during drag & drop operations:

- Set **Perform operations silently if no user input is required** if you only want the client to display the Relationships dialog box when there is further information required if you relate objects by using drag & drop.

- Set **Always enable user input** (the default) if you want the client to always display the Relationships dialog box when you relate objects using drag & drop.

To automatically set new item workset filenames to the filename in your work area:

Set **Automatically map User File to Workset File.** This enables the Create Item dialog box to populate the workset filename based on the user filename.

To automatically overwrite files during get or check out operations:

Set **Automatically Overwrite Files.** This means that files that do not have the read-only permissions will be overwritten by the get and check out operations. If this option is not set, existing writable files cannot be overwritten. You can however, still override this in the Check Out and Get Item dialog boxes

NOTE If a file has read-only permissions, it will always be overwritten regardless of this setting.

To set Use personalized DEVELOPMENT search paths as the default:

Set **Use personalized DEVELOPMENT search paths by default**. This means that when you perform a build for a DEVELOPMENT build stage, the option **Use personalized search path** is set by default in the Build Item and Build Project dialog boxes (but you can override it).

Setting the User Interface Options

Purpose   Set the User Interface options when you want to determine various display options for the desktop client.

Permissions   No permissions required.

To access the User Interface settings:

Select Tools | Preferences and select the User Interface tab.
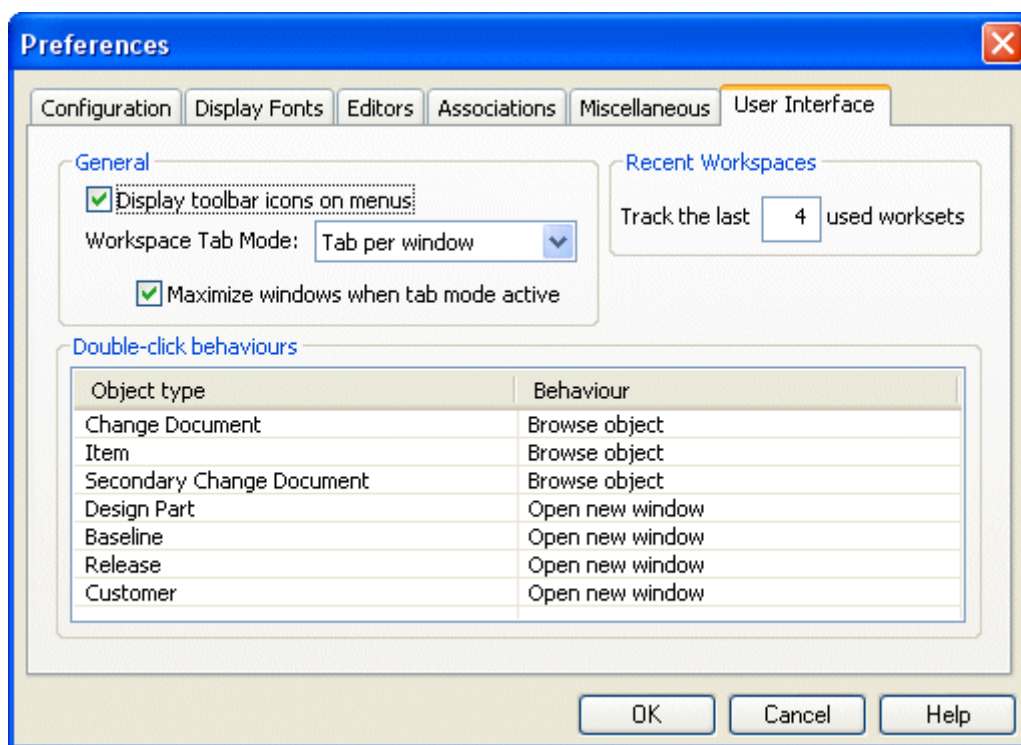
To display toolbar icons on menus:

Set **Display toolbar icons on menus** to have the associated icons from the toolbar shown beside the corresponding options on the pulldown and popup menus. This option is set on by default.

To determine whether tabs are displayed on object windows:

Set **Workspace Tab Mode** to one of the following:

■ *Tab per Window* - each open object window has a tab at the bottom. This is the default

■ *None* - the windows do not have tabs.

To automatically maximize the object windows within the main window:

Set **Maximize windows when tab mode active.** This option is only available when Tab per Window is selected for **Workspace Tab Mode**.

If you want to set the desktop client to standard Windows MDI behavior, you should unset this option and set **Workspace Tab Mode** to None.

To set the number of recent worksets stored by the client:

Enter the required integer in **Track the last *n* used worksets**. This figure determines the number of previously used worksets that are stored for you to select from the drop down workset list in the toolbar or the Recent Worksets option in the File menu. (The default is 4.)

To determine the double-click behavior for objects:

Click on the **Behavior** field in the **Double-click behaviors** list against the required object, and choose an option from the list. This option determines what happens when you double-click on a row in a grid display. The options are as follows:

Type of Dimensions Object	Possible Behaviors
Change documents (including secondary)	Browse, edit attributes, action, edit, show history, view properties, open new window
Items	Browse, edit attributes, action, edit, show history, view properties, open new window
Design Parts	Edit attributes, view properties, open new window

Type of Dimensions Object	Possible Behaviors
Baselines	Edit attributes, action, show history, view properties, open new window
Releases	View properties, open new window
Customers	View properties, open new window

Customizing the Content Windows

The Customize options enable you to determine what is displayed in the content windows for each Dimensions object. These options are organized into the following groups:

- **Views.** This determines which attributes of an object are displayed, and in what order they appear, in the lists within content windows.

- **Properties**. This determines what is displayed in the Properties dialog box for each Dimensions object.

- **Colors**. This allows you to choose color coding to indicate the phase and status of objects in lists within content windows.

NOTE The changes you make in this dialog box will affect all new object windows subsequently opened, but they do not alter the layouts of any content windows that are already open.

About the Views Tab

To carry out the Customization operations for Document Windows, you select the **Tools** | **Customize Views** or **View** |

Customize dialog on the Menu Bar. This dialog is displayed with the **Views** tab as the default as shown below.
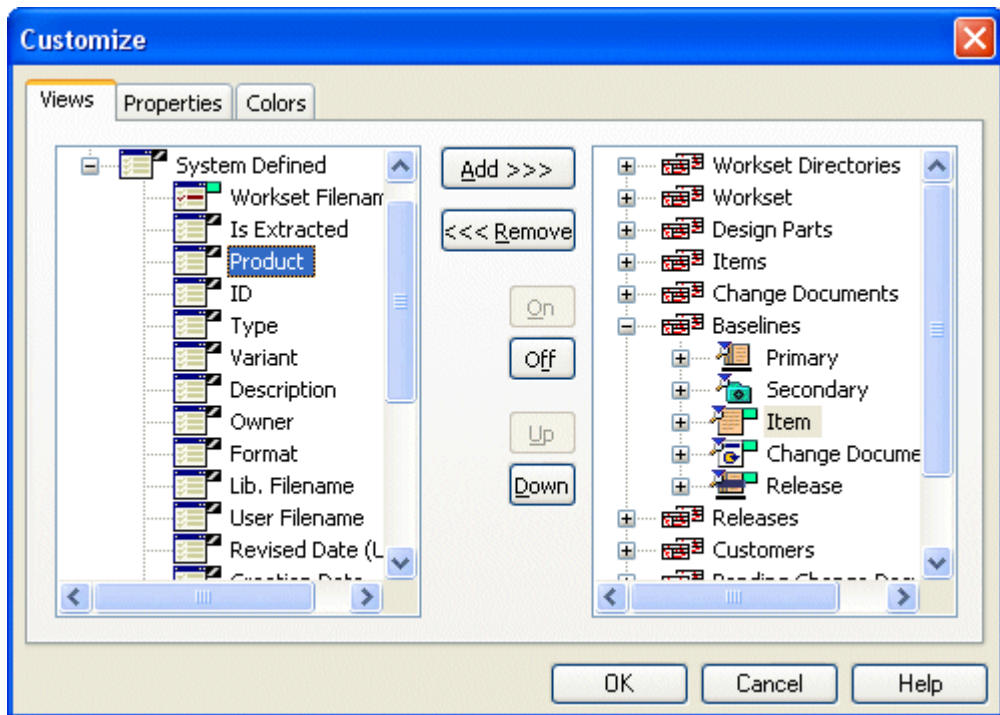
The right side shows a three-level tree-structure:

■ All Document Window types

■ Object classes viewable in each Document Window type

■ Attributes displayed for each object class (attributes which have a right-pointing red arrow are the defaults for the selected object e.g. baseline).

The left side lists candidate object classes or attributes (shown) for adding to the Document Window displays.

NOTE The changes you make in this dialog will affect all new Document Windows of the corresponding type opened thereafter, but they do not alter the layouts of object classes or the attribute display arrangements for any of that type which are already open.

About the Layout and Customization of Content Windows

Each content window, as in the example below, has a central vertical split into left and right halves. The left half contains the Primary object view, which shows the object(s) you selected when you performed the operation that opened the new window.
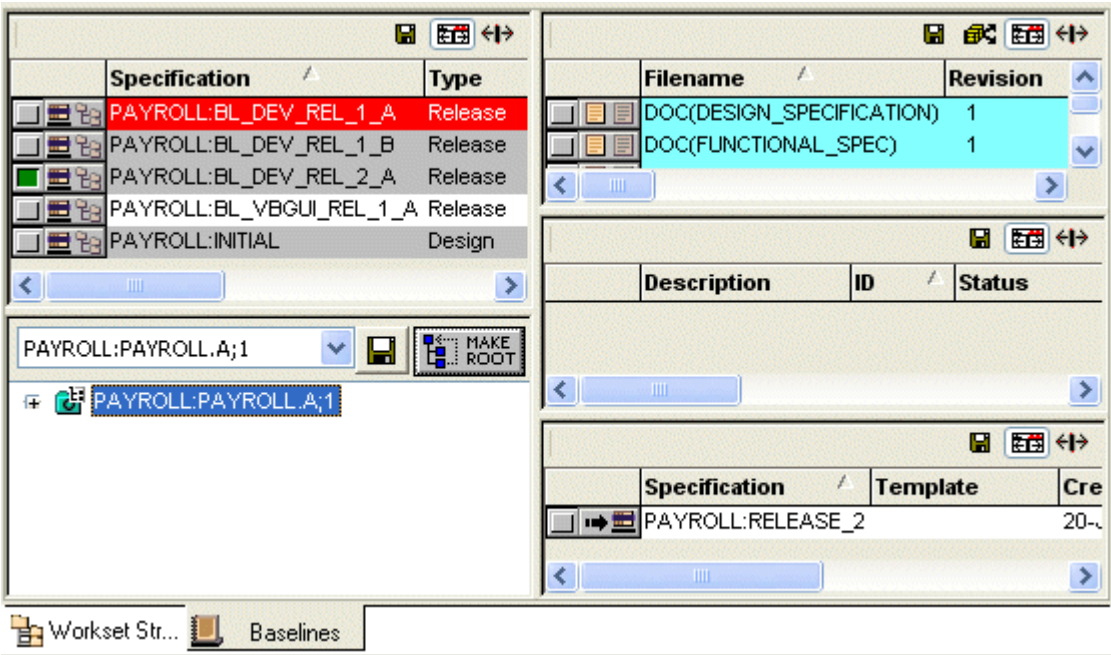
There is always a Primary object class in any content window. For some object classes, there can also optionally be a Secondary object class in the left half of the window. The pane displaying the Secondary object class, if present, always shows a tree view; either a workset or design part structure. The pane for the Primary object class can either contain a tree view, or a grid view consisting of a table of attribute values for each object.

The right half shows the objects which are related to the object you have selected in the left half. Each class of related object is displayed in a separate pane. There can be up to three related object panes displayed in a content window. Each of these panes contains a grid view listing the related objects.

You customize content windows using the Views tab of the Customize dialog box. In this tab, there is a tree structure on the right with an entry for the name of the object class of each type of content window that you can display in the desktop client.
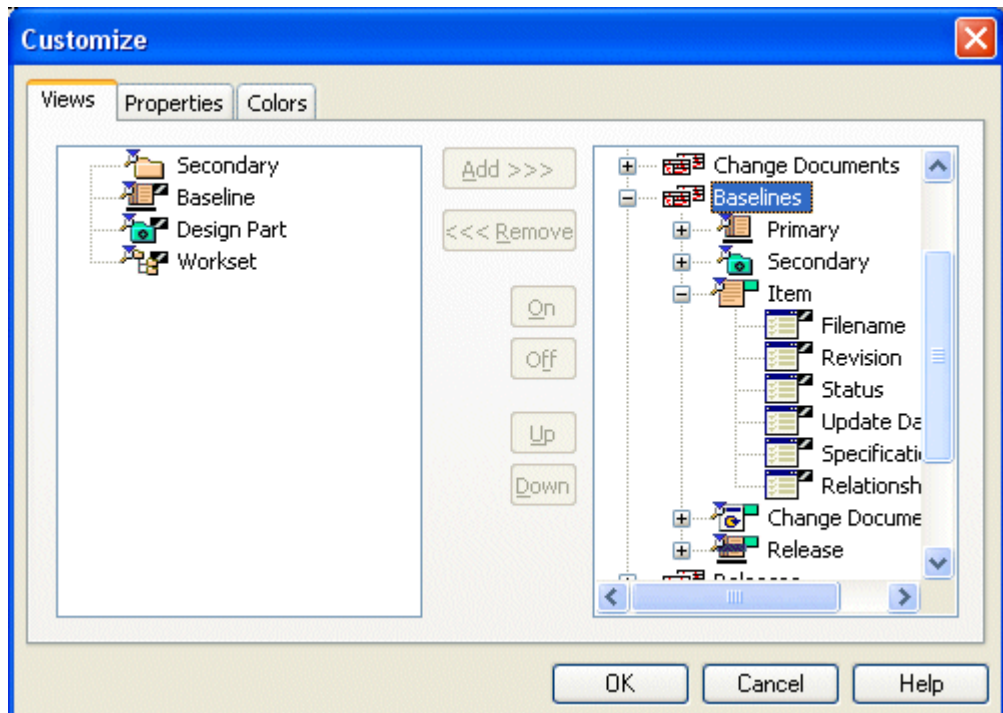
Beneath each entry are the object classes for which a pane can be displayed in the content window. An object class can be "active", which means it is to be displayed in the content window, or "inactive" which means it is not to be displayed. This is indicated by the icon at the top right of the object icon, e.g.

■ active:

■ inactive:

Beneath each of these object classes is the list of attributes to be displayed in the order in which they will appear. For a tree view, you can only display one attribute.

In the example shown, the Baselines object class is selected. Beneath this entry are the Primary object class, and the Secondary object class, which is design part. Next are the related object classes that are to appear in the right half of the window: item, change document, and release. All three are "active", therefor they will appear when the content window is displayed. Under Item you can see the attributes to be displayed in the related object pane for items.

On the left of the Views tab are the other possible related object classes you could choose to display in a Baselines content window.

Customizing Views

Purpose   Customize views when you want to choose which object classes appear in the content windows and which attributes are displayed.

Permissions   No permissions required.

To access the Views tab of the Customize dialog box:

Select Tools | Customize or click the button on the toolbar.

To add an object class to a view:

1 On the right-hand side of the Views tab, select the object class whose view you want to customize.

   The available object classes you can include in the view appear on the left-hand side.

   NOTE You cannot have more than one secondary object class, or more than three related object classes in a view. For some views there is no secondary object class.

   ---

2 If either:

   ■ you want to add a secondary object class, and there is already a secondary object class included

   or

   ■ you want to add a related object class, and there are already three related object classes included

   you will first need to remove the existing secondary object class or one of the three related object classes. In this case, follow the procedure described in *To remove an object class from a view* described below.

3 Select the object class in the left-hand side of the Views tab that you want to add. If you are adding a secondary object class, its type will be indicated either by a design part icon: or a workset icon:

4 Click the Add button.

   The icon will move into the right hand list.

5 If you want to customize the attributes for object class you have added, follow the procedures described in *To customize the attribute display for an object class in a view* below.

6 When you have finished click the OK button to save the changes.

To remove an object class from a view:

1 On the right-hand side of the Views tab, select the object class whose view you want to customize.

2 Expand the top level icon and select the object class you want to remove from the view

3 Click the Remove button.

The icon will move from the right hand list to the left hand side of the Views tab.

4 When you have finished click the OK button to save the changes.

To change the order of a related object class in a view:

1 On the right-hand side of the Views tab, select the object class whose view you want to customize.

2 Expand the top level icon and select the object class you want to move within the view

3 Click the Up button to move it farther up in the view and click the Down button to move it farther down in the view.

4 When you have finished click the OK button to save the changes.

To make an object class in a view active or inactive:

1 On the right-hand side of the Views tab, select the object class whose view you want to customize.

2 Expand the top level icon and select the object class you want to make active or inactive the view. The status of the object class is indicated by the icon at the top right of the object icon, for example:

- active:

- inactive:

3 Click the Off button to make the object class inactive, or click the On button to make it active.

4 When you have finished click the OK button to save the changes.

NOTE Only related object classes can be made inactive. The Primary object class, and the Secondary object class, if present, always remain active.

To customize the attribute display for an object class in a view:

1 On the right-hand side of the Views tab, select the object class whose view you want to customize.

2 Expand the top level icon and select the object class whose attributes you want to customize.

   Icons entitled System Defined and User Defined will appear in the left hand side of the Views tab. Expand the icons to see the corresponding attributes. These are the available attributes for the object class.

3 Expand the icon for the object class within the view in the right hand side of the Views tab. The attributes currently to be displayed in the view will appear beneath it.

4 Do one of the following:

- **To add an attribute**, select the attribute on the left-hand side and click the Add button. The attribute will move from the left-hand side of the Views tab to the right-hand side.

- **To remove an attribute**, select the attribute on the right-hand side and click the Remove button. The attribute will move from the right-hand side of the Views tab to the left-hand side.

■ **To change the order of an attribute** to the left or right in the view, select it on the right-hand side and click the Up button to move it further up in the list and click the Down button to move it further down.

NOTE If the object class is displayed in a **Tree View**, only a single attribute can be shown. Therefore, if you want to see a different attribute (e.g. in a Design Part tree, to see the Part Number instead of the Part Specification), first remove the attribute currently displayed.

---

5 When you have finished click the OK button to save the changes.

Customizing the Properties Dialog Box

Purpose   Customize the Properties dialog box when you want to choose which attributes the Properties dialog box will display for a selected object class. See "Viewing Object Properties" on page 101 for a description of how to use the Properties dialog box.

Permissions   No permissions required.

To customize the Properties dialog box:

1 Select Tools | Customize or click the [icon] button on the toolbar, and select the Properties tab.

2 On the right-hand side of the Properties tab, select the object class whose attributes you want to customize. Expand the

icon to see the list of the attributes that are currently displayed.
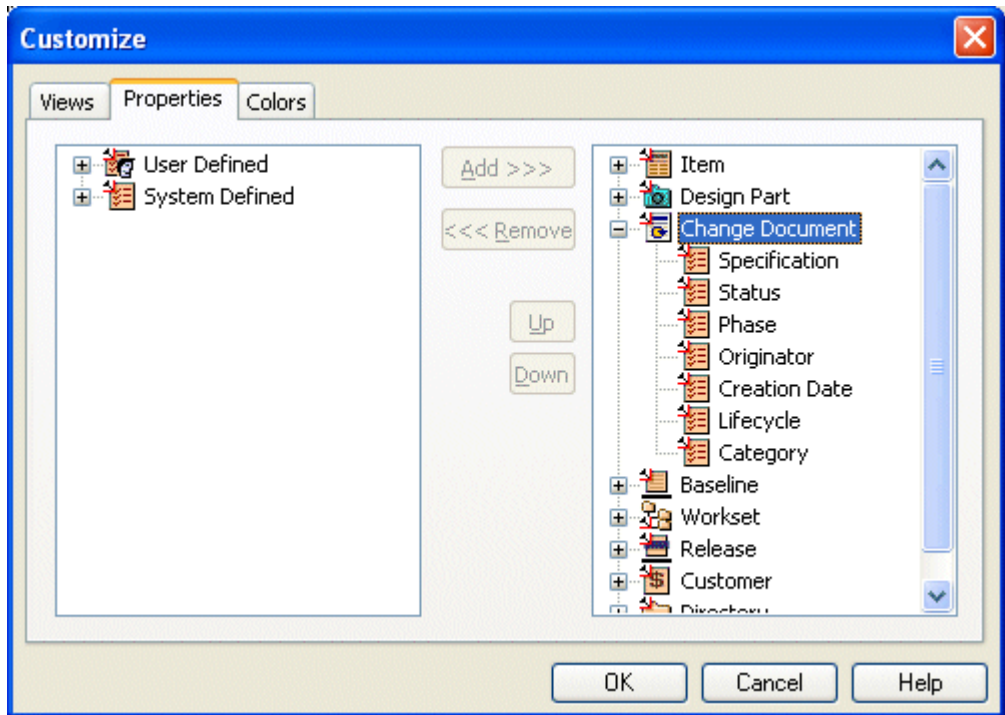
3 On the left-hand side of the Properties dialog box, expand the icons labelled System Defined and User Defined to see the attributes that are available to add to the list.

4 Do one of the following:

■ **To add an attribute**, select the attribute on the left-hand side and click the Add button. The attribute will move from the left-hand side of the Properties tab to the right-hand side.

■ **To remove an attribute**, select the attribute on the right-hand side and click the Remove button. The attribute will move from the right-hand side of the Properties tab to the left-hand side.

■ **To change the order of an attribute**, select it on the right-hand side and click the Up button to move it further up in the list and click the Down button to move it further down.

5 When you have finished click the OK button to save the changes.

About Customizing Colors

The desktop client allows you to use colors to indicate that an item, change document, or baseline is at a particular status when it appears in the lists within content windows. This coding can be used to indicate:

■ The lifecycle state of an item. baseline or change document

■ The phase of a change document in relation to the CM rules (if any) that have been defined in your process model.

For example, in the figure below, the Item object class has two statuses for which color codes have been set: *Unit Tested* and *Approved*. The status selected in the Customize dialog is *Approved* which has a black on blue color scheme. In the object

window behind it you can see *algorithms_spec.doc* in black on blue because it is at Status *Approved.*
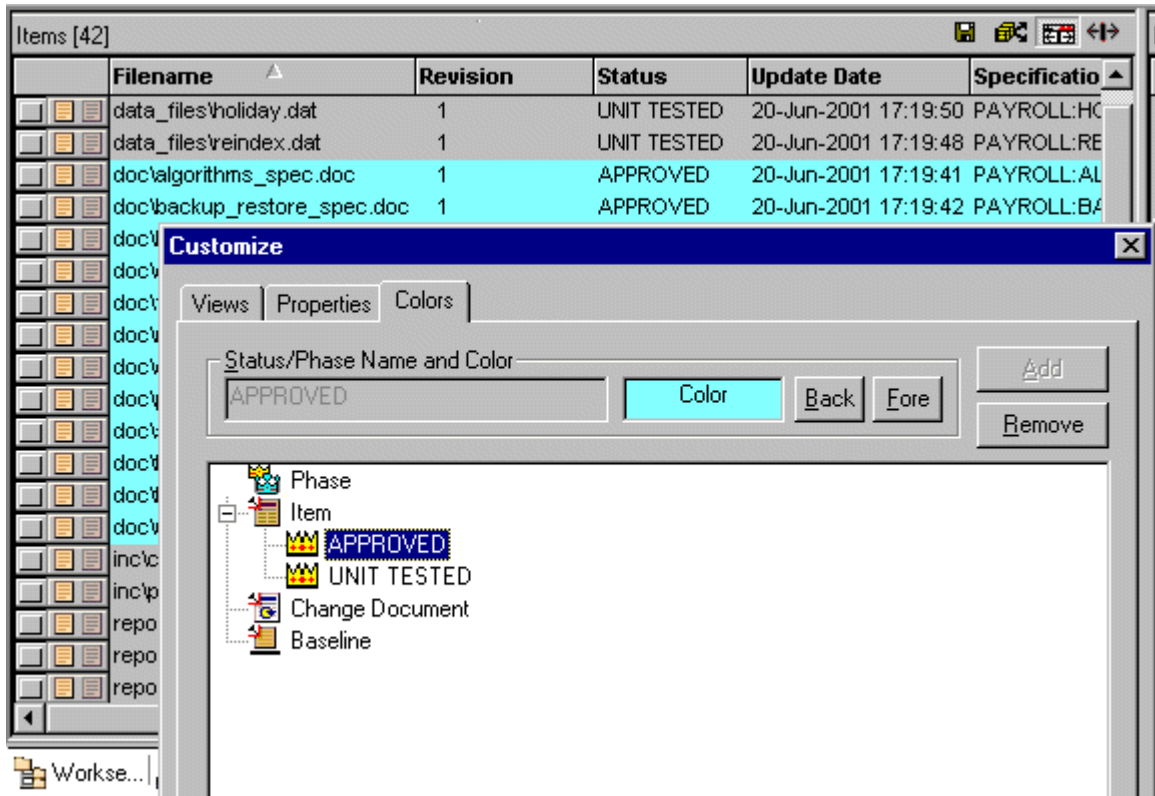
Customizing the Colors

Purpose   Customize the colors when you want to choose the colors used to indicate the Phase and Status of objects when they appear in grid displays within content windows.

NOTE You can disable this color coding using the Miscellaneous tab of the Preferences dialog box. In this case the desktop client displays object entries in black on white - it does not operate with a 'gray scale'.

Permissions   No permissions required.

To set or change the color of a phase:

1   Select Tools | Customize or click the [icon] button on the toolbar, and select the Colors tab.

2   Expand the Phase icon: [icon] Phase
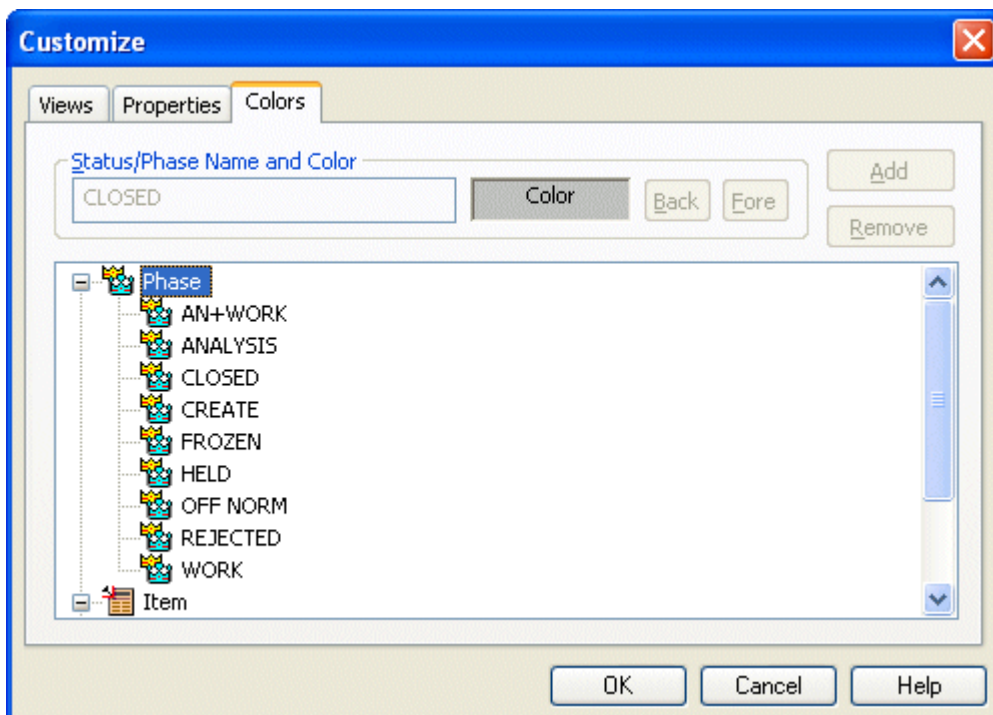
3   Select the phase for which you want to set the color.

NOTE This list of phases cannot be modified, hence the Add and Remove buttons are grayed out.

4 To set the background color, click the Back button.
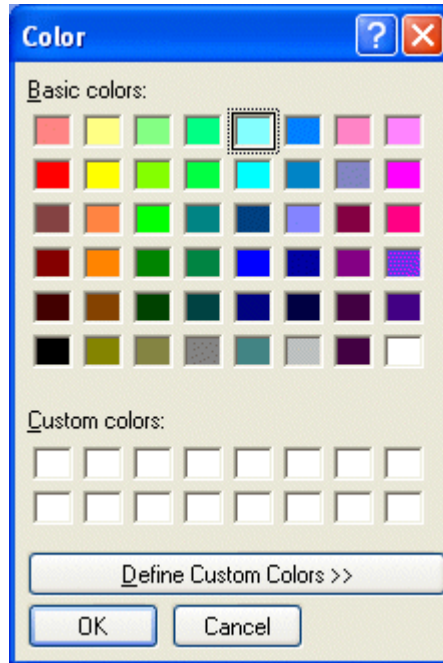
5 Select the required color from the color palette.

6 If you want to further customize the color, click the Define Custom Colors button.
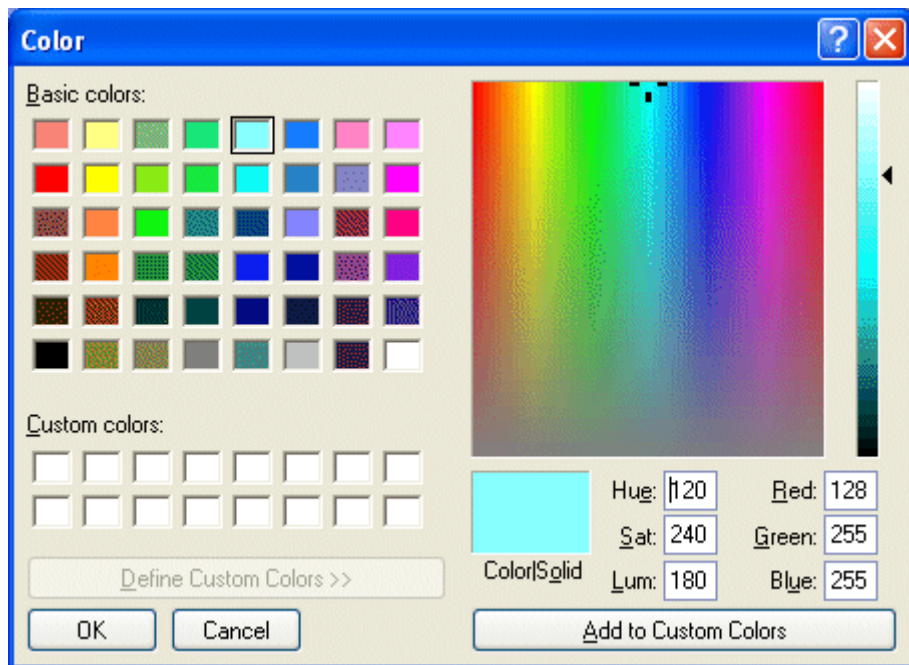
- Set the color either by entering values in the **Hue, Sat, Lum, Red, Green** and **Blue** fields, or dragging the arrow key in the color scrollbar. The color will be displayed in the **Color|Solid** box.

- Click the Add to Custom Colors button to add the color to **Custom colors** box.

7 When you have chosen the color, click OK. You will be returned to the Colors tab and the color of the selected button will showing the Color field.

8 To set the foreground color, click the Fore button.

9 Repeat steps 2,3, and 4 to set the color.

10 When you have finished click the OK button to save the changes.

To set or change the color of a state:

1 Select Tools | Customize or click the [icon] button on the toolbar, and select the Colors tab.

2 Expand the icon for the object class whose status you want to set the color:
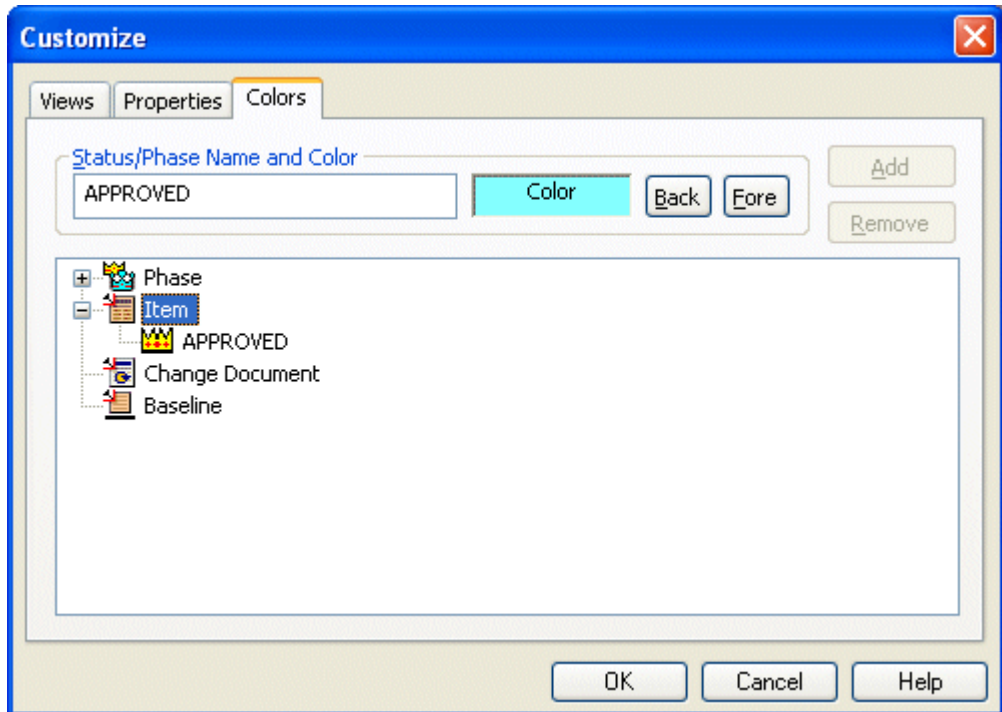
3 If the status whose color you want to set is not in the list, type the name of the lifecycle state in the **Status** field and click the Add button.

NOTE The desktop client does not check that the name you have entered exists as a valid lifecycle state in your process model.

---

4 Select the status whose color you want to set

5 To set the background color, click the Back button.

6 Select the required color from the color palette.

7 If you want to further customize the color, click the Define Custom Colors button.
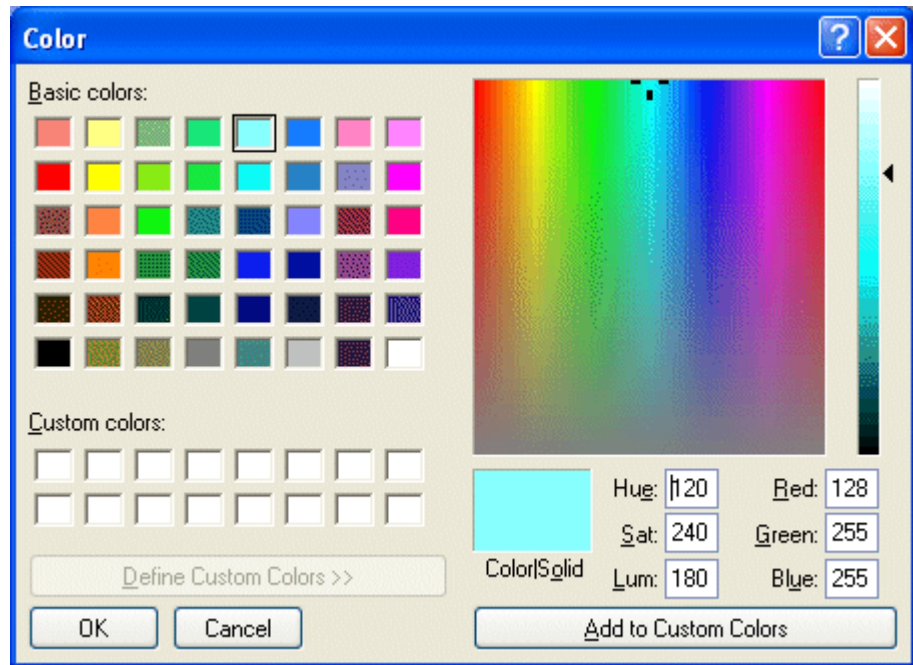
■ Set the color either by entering values in the **Hue, Sat, Lum, Red, Green** and **Blue** fields, or dragging the arrow key in the color scrollbar. The color will be displayed in the **Color|Solid** box.

■ Click the Add to Custom Colors button to add the color to **Custom colors** box.

8 When you have chosen the color, click OK. You will be returned to the Colors tab and the color of the selected button will showing the Color field.

9 To set the foreground color, click the Fore button.

10 Repeat steps 2, 3, and 4 to set the color.

11 When you have finished click the OK button to save the changes.

To Remove a Status Color

1 Select Tools | Customize or click the ![button] button on the toolbar, and select the Colors tab.

2 Expand the icon for the object class whose status color you want to remove.

3 Select the status and click the Remove button.

4 When you have finished click the OK button to save the changes.

Customizing the Menus and Tool Bar

You can customize the toolbars and menus in the desktop client by choosing which functions appear in them and in what order. You do this by customizing menu sets. A menu set is a name representing a type of user that has a set of menus and toolbars associated with it. This means that you can choose a tailored set of commands by selecting the corresponding name in the Menu Sets list by selecting View | Menu Sets, or clicking the ![button] button.

The desktop client provides predefined menu sets that you can change if you wish, or you can create new menu sets of your own. For each menu set, you can customize:

■ The pulldown menus

■ The right mouse button menus

■ The toolbars

■ The views that are automatically opened when you first start the desktop client.

For each of the menus in a Menu Set (including the tool bars) you can:

■ choose which commands are to appear on it, and what order they are to be arranged in

■ (excluding the tool bars) choose the wording to appear on the menu for each command

■ (excluding the tool bars) if desired, arrange the commands in sub-menus, nested to any depth

■ insert separator lines in the menus/sub-menus (or gaps in the tool bar row of icons), to aid the eye in the classification of commands

■ define your own custom menu items.

For each Menu Set, you can also determine, when you first start the desktop client:

■ which object views will already be opened in a content window

■ which of these content windows is initially selected (displayed at the front) within the main window.

Creating a new Menu Set

Purpose   Create a new menu set when you want to customize the menus and toolbars for your own purposes without changing any existing menu sets. You can create an empty menu set or copy one of the existing ones.

Permissions   No permissions required.

To access the Menu Sets tab:

Do one of the following:

■ Select Tools | Customize Menu Sets

■ Select View | Menu Sets | Customize.

■ Click the 🖼 button on the View toolbar or the Status bar and select Customize.

To create a new menu set:

1 On the Menu Sets tab, click the ❊ button.

A sub-dialog appears with a field entitled **Enter the Name of the New Menu Set**.

2 Enter the name you want to appear on the **Menu Sets** menu when you choose this new menu set.

3 In the **Based on Set** field, if you want to create an empty menu set, choose *<empty set>* from the drop down list, otherwise choose the name of the menu set that you want the new one to be based on.

4 Click OK on the sub-dialog. You are returned to the Menu Sets tab which now contains the details for this new menu set.

5 Continue to customize the menus as described below in Customizing an existing menu set.

To customize an existing menu set:

1 On the Menu Sets tab, choose the menu set you want to customize from the **Menu Sets** list. The left-hand side of the Menu Sets tab will contain the entries for this menu set in a tree structure.

NOTE You cannot change the *All* menu set, so when this is selected the **Categories** and **Commands** fields are grayed out.

---

2 Do one of the following:

■ To customize the pulldown menus, expand the **PullDowns** entry. This has a subitem for each menu that can appear on the menu bar.

■ To customize the right mouse button menus, expand the **Popups** entry. This has a subitem for each right mouse button menu that corresponds to a class of Dimensions object you can select in a content window.

■ To customize the toolbars, expand the **ToolBars** entry. This has a subitem for each toolbar.

3 Expand the entry for the menu or toolbar that you want to customize. If you want to customize a submenu, expand the corresponding subitem in the tree.

4 Carry out each customization of the menu/submenu as described below.

Adding a Command, Separator, or Submenu to a Menu Set

Purpose

Add a command, separator, or submenu to a menu set when you want to include or arrange menu options to a pulldown or right mouse button menu or toolbar.

Permissions

No permissions required.

To position a command, separator or submenu:

Select the existing element that the new element is to precede. If the new element is to be the last or only element on a menu/sub-menu, select the next higher-level node instead.

NOTE If you want to add a command or a separator immediately preceding a sub-menu, you cannot do so directly. You need to add the command/separator somewhere below the sub-menu and afterward to move this element upwards (as described below) until it precedes the sub-menu.

Furthermore, to add a submenu immediately preceding a submenu, you have to temporarily add a separator (or a command), and to move it into position (as explained above) to act as a "placeholder". Then select it and add the sub-menu, which will then precede it. Finally, remove the placeholder.

To add a command:

1 From the **Categories** list, select the category that contains the command you want to add.

   The commands belonging to that category appear in the **Commands** list below.

2 From the **Commands** list, select the command you want to add.

The description below the **Commands** list describes the command you have chosen.

3   Press **Add.** The command is added to the menu structure with default wording which, if you wish, you can then edit (see below).

To Add a user-defined Command:

> **NOTE** User-defined commands are not the same as custom tools because custom tools must be placed on the same menu (user-defined commands can be distributed across various menus). Additionally, user-defined tools do not support replaceable parameters when invoked, unlike custom tools.

1   From the **Categories** list, select the **User Defined** category.

The **Commands** list immediately below contains all currently defined user commands (if any) and a 'User Defined' option.

2   Select 'User Defined' and click **Add**.

3   Type the **Menu Item name** e.g. &Network Admin

4   Type the command in the **Command to execute** field, e.g.

    ifrun60.EXE C:\PCWIN\APPS\dfs_admin.fmx

5   For **Description**, type the description which will appear on the Status Bar when you pause the mouse pointer over this command.

    6   Click **Add** to add the command.

To add a separator:

  1   Click **Add Separator**.

    An entry appears as
    "-----(Separator)-----" in the tree structure, but on the menu/
    sub-menu itself it will appear as a horizontal line, and on a
    tool bar it will appear as a narrow space between the
    preceding and following icons.

To add a sub-menu

NOTE This is not possible on the tool bars

---

  1   Click **Add Submenu**.

    An entry appears as "**-----(Submenu)-----**".

  2   Edit this text to your required wording as described in *To edit the name of a command or a sub-menu* below.

Bear in mind that this addition is now another node which must be taken into account in the rule (explained above) for placing any further additions.

To edit the name of a command or a sub-menu

NOTE This is not relevant for the tool bars.

---

  1   In the structure tree on the left, select the element whose wording you want to change.

  2   Click **Edit Item**. The existing wording appears highlighted, followed by a cursor.

  3   To change the description, type or overtype the field.

  4   Click **End Edit**.

To edit a user-defined command

1 In the structure tree on the left, select the user-defined command you want to edit.

2 Click **Edit Item**.
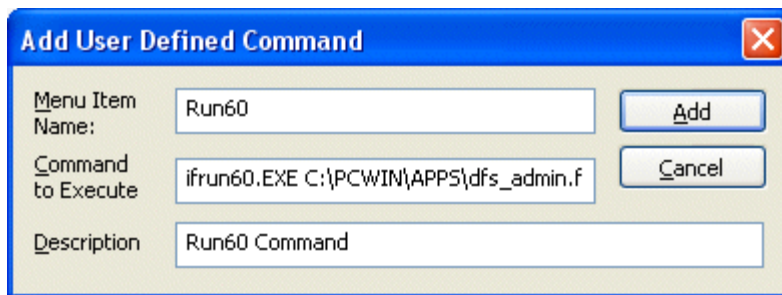
3 Type the **Menu Item name** e.g. &Network Admin

4 Overtype the command in the **Command to execute** field.

5 For **Description**, type the description which will appear on the Status Bar when you pause the mouse over this command.

6 Click **Add** to update the command.

To define a keyboard shortcut

1 In the structure tree on the left, select the command or sub-menu whose keyboard shortcut you want to define or change.

2 Click **Edit Item**. The existing wording appears highlighted, followed by a cursor.

3 Insert an "**&**" (ampersand) preceding the letter that will be used if you want to make this command or sub-menu selectable by typing that letter on the keyboard. (On the menu itself this letter will appear underlined.) To change the letter delete the existing ampersand and reinsert it before the required letter.

Note that the same letter cannot be used more than once in any one menu or sub-menu, so if you want this feature to be available, for a given element, you may sometimes need to move the "**&**" in some of the commands so that it precedes a different letter.

4 Click **End Edit**.

To change the position in which an element appears:

On this menu, or on one of its sub-menus:

1 In the structure tree on the left, select the command or separator that you want to reposition.

2 Click the Up: ⬆ or Down: ⬇ buttons to move the element up or down in the tree.

3 Repeat as necessary, until the elements appear in the desired order.

To Remove an element from a menu or a sub-menu:

1 In the structure tree on the left, select the command, separator, or sub-menu that you want to remove.

The wording of the selected command appears beneath the structure tree for you to confirm which command you have selected.

You cannot remove a sub-menu if there are any commands within it, you must first remove all the subitems before you can remove the sum-menu entry.

2 Click **Remove Item**.

To Set Initial Views

Purpose

Set initial views when you want to determine which object views will be automatically opened when you first log in to the desktop client.

Permissions

No permissions required.

NOTE Any selected views that display a dialog box when first opened (for example Change Document Catalog) will also do this on startup.

To set initial views:

1 Do one of the following:

- Select Tools | Customize Menu Sets

- Select View | Menu Sets | Customize

- Click the button on the View toolbar or the Status bar and select Customize.

2 Select the Menu Set for which you want to set the initial views from the **Menu Sets** list.

3 Select either:

- **No initial views** to have the main window displayed with no views opened.

- **Auto-display these views** to have the main window displayed with the views that are selected in the list beneath.

4 Select each view in the list that you want to be automatically opened when you start the desktop client.

5 To determine which view will be initially selected once all the initial views have been opened, select its name in the list and click the **Set default view** button.

User's Guide

The name of view you have set as the default will be displayed beneath the list.

6 Click **OK** to confirm the changes.

Customizing Tools

About Custom Tools

The desktop client enables you to add your own customized tools to perform tasks from within the desktop client. A custom tool employs an executable file (.exe, .bat, or .cmd) that can be run from your local machine or a network and is invoked from a menu selection within the desktop client. It can also be supplied with information from the desktop client at the time it is invoked. This is defined using keywords and filters, for which values are substituted at run time. Once started, such a process runs independently outside the desktop client GUI, and may itself involve a GUI or console-mode interface for its operation.

For a detailed account and examples of using custom tools, see "Using Custom Tools in the Desktop Client" on page 497.

Once defined, the menu options for the custom tools appear as a group, by default at the bottom of the **Tools** pulldown menu. You can change the position in which they appear by moving the *<custom tools insertion point>* entry under the Pulldowns category in the **Menu Sets** tab of the **Customize** dialog. The menu options for custom tools must always appear together, but they can be arranged in a hierarchy within their group.

About Keywords and Filters for Custom Tools

The commands and parameters used with a custom tool may include variable information which is supplied by the desktop client at the time the tool is invoked. This can consist of two components, a keyword, which returns some value or name of an object in the desktop client, and optionally, a filter keyword, which specifies some part of this information.

Using the ▶ button beside the fields in the **Tools** tab enables you to select valid entries and inserts the correct syntax.

A keyword is specified by preceding it with a "$" and optionally a filter keyword, and enclosing it in "(" and ")" brackets.

For example:

```
'$Dir(WorksetRootFolder)'
```

returns the drive portion of the workset root directory

```
'$(WorksetRootFolder)'
```

returns the path of the workset root directory.

If the keyword is a column, or set of columns, it is specified by enclosing it in "[" and "]" brackets and separating the column names with commas.

For example:

```
'$[Description,Status]'
```

returns the values from the Description and Status columns for each row in a Change Document view.

The keywords and filter names are case-sensitive (but not column names). If a keyword cannot be evaluated, or is inapplicable at the time the tool is invoked, it will evaluate to null (""). Some

keywords only apply when a particular view is open in the desktop client. For example, the WorksetFolder keyword can only be evaluated from a workset structure view.

For a list of valid keywords and their function, see "Getting Selection Information to the Tool Using Keywords" on page 501. For valid filter keywords, see "Modifying Parameter Replacements" on page 506.

Defining Custom Tools

Purpose Define custom tools when you want to customize a procedure or task which you can perform from within the desktop client.

Permissions No permissions required.

To define a new custom tool

1 Select **Tools | Customize Menu Sets/Tools,** or **View | Menu Sets | Customize,** or click on the ![icon] icon on the View toolbar or the Status bar and choose **Customize**.

2   Select the **Tools** tab.

3   Click the ✳ button beside the **Menu texts of user-
modifiable tools** text box.

4   Type the text you wish to use for the menu option for this
new custom tool in the menu text area.

If you want to specify menu options in a hierarchy within the
group of custom tools:

enter a "!" separator between the commands.

For example, the entries:

```
GUI Tools!Tool 1
GUI Tools!Tool 2
Tool3
```

Will appear as:

In the pulldown menu.

5   To make this command selectable by typing a letter on the keyboard, precede that letter with an & (ampersand) in the name. (On the menu itself this letter will appear underlined.)

6   To change the position of the custom tool within the existing menu options (if any) select it and use the ⬇ and ⬆ buttons to move it up or down.

7   Enter the file to be executed in the **Command** field, or use the browse button to locate it. You can use a keyword/ filter combination as part of the name/path of this file. Use the ▶ button to select this if required. If you do not require a filter keyword, choose *<unfiltered text>* from the submenu.

8   Enter any arguments required by the executable file in the **Arguments** field. You can insert keyword/ filter combinations as part of these arguments. Use the ▶ button to select this, if required, as in the **Command** field above.

9   Enter the folder from which the process will be started in the **Start in** field, or use the browse button to locate it. You can use a keyword/ filter combination as part of the name/path of this file using the ▶ button as above.

10 Click OK to commit the changes.

To Edit a Custom Tool

1   Select **Tools | Customize Menu Sets/Tools**, or **View | Menu Sets | Customize**, or click on the 📲 icon on the View toolbar or the Status bar and choose **Customize**.

2   Select the **Tools** tab.

3   Select the name of the custom tool in the **Current user-modifiable tools** text box.

4   Do one of the following:

■   To change the name, click on and edit the name in the text box.

■   To change the **Command**, **Arguments** or **Start in** fields for the selected custom tool, enter or edit the values as described in the section *To define a new custom tool* above.

■   To change the position of the custom tool within the existing menu options (if any) select it and use the ![down arrow] and ![up arrow] buttons to move it up or down.

5   When you have finished, click OK to commit the changes.

To delete a custom tool

1   Select **Tools | Customize Menu Sets/Tools**, or **View | Menu Sets | Customize**, or click on the ![icon] icon on the View toolbar or the Status bar and choose **Customize**.

2   Select the **Tools** tab.

3   Select the name of the custom tool in the Current user-modifiable tools text box.

4   Click the ![X] button.

5   Click OK to commit the changes.

Customizing the Starting of the Desktop Client

Purpose   Customize the starting of the desktop client when you want to configure the Windows launch icon Desktop Client, which starts

up the desktop client to pre-load connection choices and perform Dimensions commands (e.g. set default worksets, etc.).

Permissions   No permissions required.

To customize the starting of the desktop client:

1   Locate the Desktop Client icon created by the installation process. This is normally in the Start menu.

    If the Desktop Client icon is not in the Start menu:

    a   Right click on the **Start** button and select **Open**.

    b   In the **Start Menu** window, double-click the **Programs** icon.

    c   In the Programs window, locate the Desktop Client icon in the Dimensions program group.

NOTE In order to modify this it is strongly advisable to create a shortcut for the customized version, and modify the shortcut, **not** the original PCWIN.EXE. ***Never change the original properties***.

---

2   Create a shortcut to the desktop client by dragging this icon on to the Windows desktop.

3   Right click on this icon and select **Properties.**

4   Select the **Shortcut** tab.

    The **Target** field will read something like:

    `C:\SERENA\CHANGEMAN\DIMENSIONS\9.1\PROG\PCWIN.EXE`

    (the actual entry will depend on the *DM_ROOT* choice you made during installation).

5   Edit the **Target** field to customize how the desktop client is launched. You can edit the Target field to specify:

    ■   Connections to specific hosts and/or Dimensions databases.

- Commands to be performed once a connection has been made.

- SHOW_DIRS accesses the workset directories display at startup. For example:

  DM_ROOT\PROG\PCWIN.EXE SHOW_DIRS

- ClearWindowData

  Remove client persistency data from the Registry, so resetting to defaults.

Example Target Field Commands

You can edit the **Target** field to specify that a valid Dimensions command be executed once a connection has been made. It is not envisaged that this mechanism should be used as a full alternative to using Command Line, but it is very useful for setting default worksets, etc. (see example below).

The syntax is as shown below followed with an example:

```
DM_ROOT\PROG\PCWIN.EXE-SECTION <connection-name>
                  <command>
```

or

```
DM_ROOT\PROG\PCWIN.EXE<command>
```

```
C:\SERENA\CHANGEMAN\DIMENSIONS\9.1\PROG\PCWIN.EXE
   -SECTION DEVELOPMENT SCWS PAYROLL:WS_DEV_REL1 /
   DIRECTORY=C:\ /DEFAULT
```

Appendix A: Using Custom Tools in the Desktop Client

In this Appendix

Introduction

This appendix is a guide to adding custom tools to the desktop client that can be supplied with selection data from within the client as command-line parameters. It describes the mechanism for adding these tools, the keywords and options that can be used for each tool, and presents a couple of simple walkthrough examples. The first creates a "DOS Here" tool to open a command-prompt console based on the selected workset folder. The second is a "save view" tool that saves particular columns from an item view (as opposed to the built-in desktop client **Save Display Contents** function which would save all columns).

What is a Custom Tool?

A custom tool is simply an *.exe*, *.bat* or *.cmd* file resident on the user's machine or otherwise startable (perhaps from a network share) that can be invoked from within the desktop client and optionally be supplied with information based on either selections in the current view or some global information within the client. The tool started can be a console-mode tool or lead to a Windows GUI. Once started, the tool is completely independent of the client from which it was invoked.

You can also issue a command-line command by preceding the instruction with %dmcli%. For example:

    %DMCLI% SCWS "PAYROLL:WS_MAKE" /DEFAULT

would set the current workset. See the Command-Line Reference Guide for further details about command-line syntax.

Custom tools are defined using a new dialog within the client, accessible from the **Tools | Customize Menu Sets/Tools** menu option and the **Tools** tab on the resulting dialog. This dialog

presents a list of the tools defined for the user so far (in terms of the text that appears on the menus), a set of controls for moving the tool order around and adding or removing tools, plus a set of entry fields for defining the program to start, command line options and startup folder for new tools. This dialog box is reproduced in below.
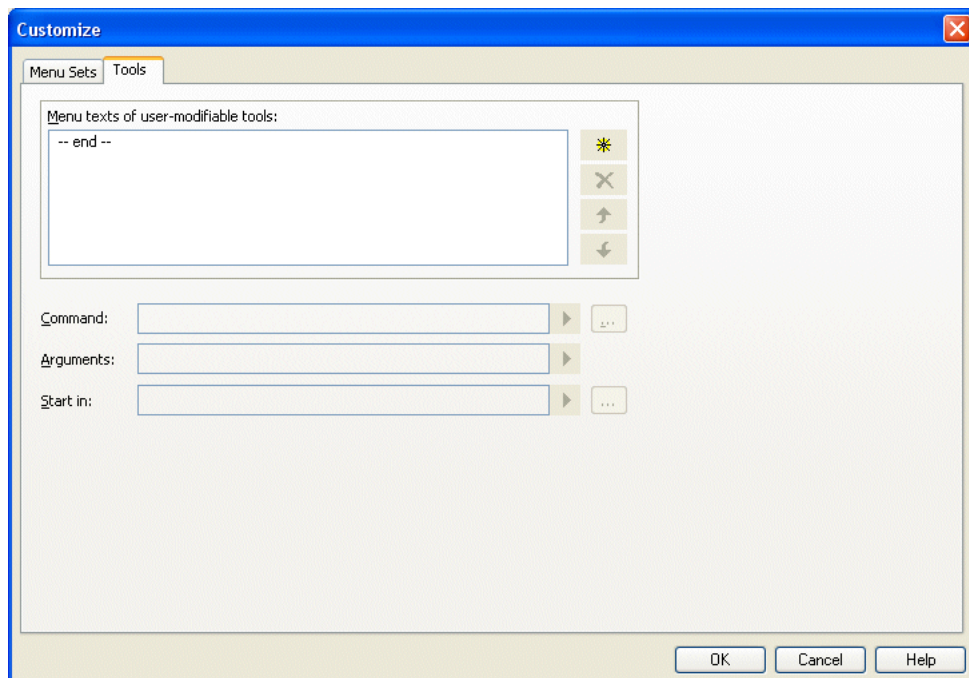
NOTE Existing users who have modified their menu sets such that they have changed the **Tools** menu will not see the option **Customize Menu Sets/Tools**, however bringing up the menu set customization dialog will also show the **Tools** tab.

Tool definitions apply to all menu sets; it is currently not possible to restrict one or more tools from appearing in particular sets. You can however change where the tools appear in different sets.

Defined tools appear by default at the foot of the desktop client's **Tools** pulldown menu. This can be changed by moving the marker command *<Custom Tools>* to a different pulldown menu within a menu set. At run-time, this marker command is replaced with either the set of defined tools or simply does not appear if no tools have been defined.

NOTE Existing users who have customized the **Tools** menu for one or more menu sets will not see tools appear for those sets (as the menu layout will not contain the *<Custom Tools>* marker command). This is easy to fix by simply editing the sets in question and adding the special marker to either its default location at the foot of the **Tools** pulldown menu, or to some other preferred location. Currently it is not possible to add custom tools to any context menu or to distribute the tools around different pulldown menus.

Custom tools can be arranged into sub-menu hierarchies beneath the marker command if you wish, by specifying the character `"!"` in the menu text. To group tools into related sub-menus, simply ensure that the text to the left of the `"!"` character is the same (including case) for all tools that you wish to group together. For example, you might wish to separate console (character-mode) tools from GUI tools, all positioned beneath a "My Tools" menu entry. To do this, the menu texts for the tools might read:

```
My Tools!Console Tools!Tool1
My Tools!Console Tools!Tool2
My Tools!GUI Tools!Tool3
My Tools!GUI Tools!Tool4
My Tools!GUI Tools!Tool5
```

At run time, the marker command would be replaced by a pull-right menu entry entitled "My Tools", itself containing two pull-right menus, "Console Tools" and "GUI Tools", with the actual tools contained within these menus.

To add accelerator mnemonics to a menu simply prefix the desired letter with the "&" character when specifying the menu text on the **Tools** definition dialog.

Getting Selection Information to the Tool Using Keywords

Although custom tools can be used as a simple convenience to gain access to various executables from within the client and avoid having to return to the Windows desktop or **Start** menu hierarchy, they are really intended to be used in conjunction with information from within the desktop client about a selected set of objects within a view or some other "global" information within the client that is not view-specific. For example, you might select one or more items in a workset folder and want to have the filenames of those items passed to a custom tool. This is achieved using keywords and/or view's column names in the tool's definition. When the tool is invoked, these "parameters" are dynamically replaced with the actual values selected. You could then use this information as it is, or combine it with calls to the Dimensions API's within your tool to add to its value.

Replaceable parameters can appear in any of the tool's **Command**, **Start In** or **Arguments** definition fields, although some fields will allow different combinations of parameters than others. If no value is available for a parameter, it simply collapses to nothing in the resulting text (unless there is an error in the definition, in which case a message will be displayed). Most of the global keywords do not require a view to be open in order to produce a value. View-specific keywords (also known as column keywords) require both a view of the required type to be selected (have focus) within the desktop client, and also to have one or more rows selected within that view in order to operate.

Table 14-1 lists all keywords recognized by the client, together with an indication of whether they are global or need to have a specific view active when the keyword replacement is attempted.

Table 14-1. Valid Parameter Keywords

Keyword	Replaced with	Applicable to
Product	Name of the scoping product, e.g. PAYROLL	Global
Workset	Name of the current active workset, e.g. WS_INITIAL	Global
WorksetRootFolder	Folder specification of the root folder to which the workset is mapped	Global
WorksetFolder	Current selected folder (in sub-folder format, e.g. subfolder1\subfolder2)	Workset-Structure view
UserID	Operating System user ID used at initial login	Global
Connection	The logical name of the set of connection details as shown in the login dialog	Global
hClientWnd	The handle (HWND) of the main desktop client window	Global
hMdiFrame	The handle (HWND) of the active MDI frame window within the client	Global
FrameName	The logical name associated with the active MDI frame window. Usually this is used to store window persistence data, but you can use it as a unique "view id", perhaps to verify that supplied data came from the expected window (see Table 14-2)	Global

Table 14-1.   Valid Parameter Keywords

Keyword	Replaced with	Applicable to
DmRoot (or PcmsRoot)	Root folder for Dimensions install on the current machine	Global
ConnectionString	Database connection string, otherwise known as "TWO_TASK", from the initial login dialog	Global
Node	Server name used on initial login	Global
NodeDmRoot (or NodePcmsRoot)	For a remote node, the Dimensions install folder (for local connections, this will be the same as *DmRoot*)	Global
Part	The selected part in the Design Part tree view	Design Part view

Table 14-2. Valid "FrameName" Values

Frame Name
BaselineFrame
ChdocFrame
CustomerFrame
DesignPartFrame
ItemFrame
PendBaselineFrame
PendChdocFrame
PendItemFrame
ReleaseFrame
SecChdocFrame
WsetDirFrame
WsetFrame

Table 14-1 above lists the fixed keywords recognized by the desktop client when processing a tool definition. You can also use view-specific column names (therefore the set of "keywords" available will differ depending upon what view is active and what columns it is showing). In order for a particular column to be used as a keyword, the view must have that column present (although it need not be physically visible without scrolling). When a column name is used as a keyword, any case can be used to encode the column into the tool definition (unlike other keywords, which are case-sensitive).

Parameter keywords are embedded in tool definition texts using a simple syntax. Firstly, the "$" character is used to introduce a parameter. If the keyword is one of the fixed set as shown in Table 14-1, the keyword then follows, wrapped inside "(" and ")" brackets. For example, the *WorksetRootFolder* keyword would be specified as "$(WorksetRootFolder)". Note that keyword names are case-sensitive.

If the keyword should actually be interpreted as a column name, it must instead be wrapped in square brackets, "[" and "]". For example, if we wanted the Status column from a Change Document view, we would write the parameter thus: "$[Status]". To retrieve the values of all columns in a selected row use "All" inside the square brackets, e.g. *$[All]*. "All" is not a fixed keyword as such (so is not shown in Table 14-1) but does have special meaning to views when tool definitions are processed.

To help in adding keywords to tool command lines, the **Tools** dialog has special selection buttons ▶ to the right of each entry field that list the valid keywords that can be used for that option. The illustration below shows the list for the startup folder entry field activated. On selection of a keyword, it will be inserted at the current edit point within the entry field, pre-formatted with the *$()* characters in place.
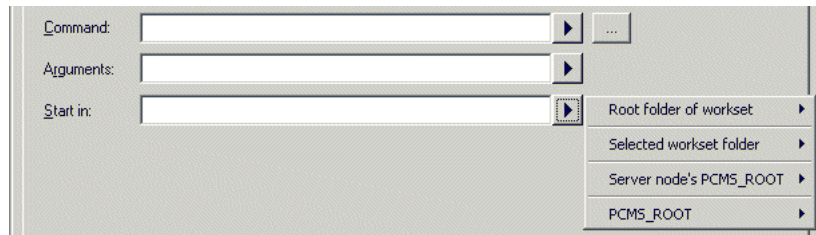
View column names can only be used for the **Arguments** field and here you have two choices, "All", or a specific set of columns. If you select **All** from the drop-down, the appropriately formatted "$[All]" keyword is added to the field. If you elect to use a specific set of columns, the string:

```
"$[Column1,Column2,…]"
```

is added to the field, which you must then edit to replace Column1, etc. with the actual column names.

Modifying Parameter Replacements

In addition to simple substitution, most parameters can be further tuned using "filters". A filter is simply another keyword that is placed between the "$" and opening "(" of a keyword that modifies the returned value in some way. The most common use of filters is to extract parts of filename-based keywords, for example, if you just wanted the extension of a filename.

Some of the filters can also be "Chained" by joining the filter keywords together with an "&". For example Base(Filename) returns the name of a file between quotes. NoQuote&Base(Filename) would return the name of the file without the surrounding quotes.

Table 14-3 shows the set of filters recognized by the client and the information that is returned when applied to supported keywords.

Table 14-3. Valid Filters

Filter keyword	Meaning
Uid	Instead of returning the textual value of the selection, returns the database ID of the object selected that you can then use in Dimensions API calls
RevisionUid	Like *Uid*, this returns the database ID of an object. Applies to item objects only
Drive	Returns the drive component of a filename-based parameter keyword
Dir	Returns the directory (not including drive) component of a filename-based parameter keyword
Path	Returns the *drive + dir* components of a filename-based parameter keyword

Table 14-3. Valid Filters

Filter keyword	Meaning
Base	Returns the base filename (no path, no extension) of a filename-based parameter keyword
Ext	Returns the extension component of a filename-based parameter keyword
Name	Returns the *basename* + *extension* components of a filename-based parameter keyword
NoQuote	Stops the production of quotes around any filterchain(parameter)or filterchain[column-list] spec
NoColQuote	When tool parameters are written to a file (using the @ modifier), column data gets quoted with " quotes by default. This stops the quoting in the same way as NoQuote stops quoting for a parameter as a whole
QuoteChar	Allows you to change the quote character (default ") used to surround a parameter. The character to use must follow the filter name, eg. QuoteChar#. The "&" separator may not be used with this keyword.
ColQuoteChar	As QuoteChar, but this time allows you to specify the quotation character for column data when a file is used. The "&" separator may not be used with this keyword.

Table 14-3. Valid Filters

Filter keyword	Meaning
ColSepChar	For both command line and file-destined data, allows you to specify the separator character between columns. The default is "," and like QuoteChar and ColQuoteChar the intended character must follow the filter name. The "&" separator may not be used with this keyword.
RowSepChar	For both command line and file-destined data, allows you to specify the separator character between rows. The default is " " (space) and like QuoteChar and ColQuoteChar the intended character must follow the filter name. The "&" separator may not be used with this keyword.

NOTE Filename filters only work with Windows-style filenames!

Filters cannot be applied to column-name keywords, with one exception. If you wanted to return the database ID's of a set of selected rows, you would use the *Uid* filter in conjunction with either the *All* keyword or some view-specific column (if the latter, the column must exist in the view so its perhaps safer to use *All*). In this case, the keyword is technically ignored and the set of database ID's returned instead. Inside the tool definition, the parameter would appear thus: *$Uid[All]*. This is the only time a filter can be used with column-name based keywords at present and is also the only way to retrieve the information given in the example.

As an example of filter usage with global keywords, to adjust the *WorksetRootFolder* keyword so that it only returned the directory and not drive into a command line, you would specify "$Dir(WorksetRootFolder)". Like parameter keywords, filter keywords are case-sensitive.

In the same way as for parameter keywords, the **Tools** dialog helps in constructing the correct syntax by offering selection menus of filters for all parameter keywords that can be filtered, with the list only offering valid filters. The illustration below shows the filters for the WorksetRootFolder parameter keyword selected.
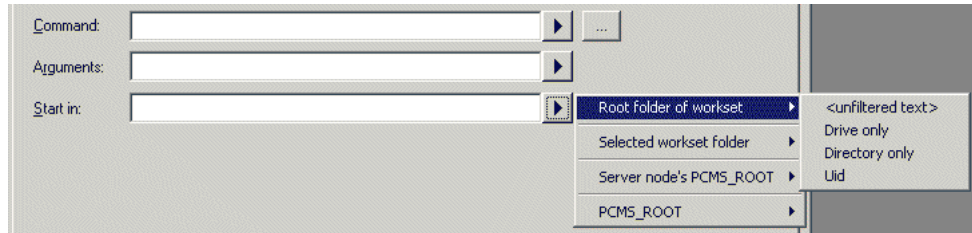
The *<unfiltered text>* option shown in the filter list simply means the same as no filter applied, i.e. the parameter keyword is specified on its own and the value returned for the parameter is inserted into the relevant entry field with no adjustment. The option exists because the menu for the keyword effectively prevents direct selection of the parameter keyword itself.

In addition to parameter and filter keywords, "free text" can be added to any of the tool's definition fields (outside of a parameter) and is reproduced in the output text as-is, so for example you can wrapper parameter keywords with additional text if you wish. You could, for example, construct *name=value* pairs by adding the "name=" part as free text:

```
WorksetRootFolder=$(WorksetRootFolder)
```

and so on. At runtime, this might appear as

```
WorksetRootFolder="c:\myworkarea\root"
```

on the tool's command line, depending upon the actual workset root.

As the definition is built up, spaces do not get inserted into fields automatically. If you want a space to appear between parameters, you must add it manually.

Parameter Output

By default, parameter output is written to the command line for the tool (in the case of the **Arguments** field) or used to modify the tool name to start and/or startup folder. The discussion that follows applies to the **Arguments** field only.

Each parameter value is written to the command line enclosed in double-quotes ("), so that embedded spaces are handled correctly. When column names are used, the entire column set is written within one set of quotes, with each column value being comma-separated. For example the parameter *$[Description, Status]* applied to a Change Document view with two selected rows would cause the following to appear on the command line for your tool:

```
"row1descriptionvalue,row1statusvalue"
"row2descriptionvalue,row2statusvalue"
```

Note that as the columns within a row are comma-separated, for this method to work effectively the data output should not be data that is likely to contain commas! If you find you need to work with data containing comma characters, you will find that writing the data to a file will be more useful, as follows.

When a lot of rows are selected, the amount of data to be written might be excessive for a command line (or, as mentioned above, the data might itself contain comma characters with the potential to cause confusion). In these cases you might wish to use a "response file" to hold the output and to have the name of the file passed to your tool. You can then open the file and walk through the output as you require.

To cause output to be redirected to a file, use the "**@**" character immediately after the parameter's introductory "**$**". Using the same example, we would thus encode the parameter as *$@[Description,Status]*.

When this parameter is processed, a temporary text file will be created to hold the data (one row per line in the file) and the name of the text file, prefixed with"@", passed on the command line to your tool. Your tool can then detect the command line parameter prefixed by "@" and interpret it as a filename, open the file and receive the results. The second sample walk-through at the end of this file uses this approach. The output shown earlier would appear as follows within the file:

```
"row1descriptionvalue","row1statusvalue"

"row2descriptionvalue","row2statusvalue"
```

Note that each row is not enclosed in quotes (as new lines indicate new rows for us) but each column is quoted. This allows you to work with data containing embedded commas that would be misinterpreted if it were passed as raw data on the command line (as your tool would not know whether the comma was a field break or part of the field data).

The **Tools** dialog does not contain any special helpers for specifying response-file usage. You must add the necessary keywords (using the drop-down helpers if you want) and then manually insert the "@" character. Also your tool is responsible for deleting the temporary file after use.

A Simple Walk-through: "DOS Here"

This section presents a small walk-through example of adding a command prompt to the tools menu that opens in the same folder as the selected folder in the Workset Structure view. This is

very similar to the Windows "DOS Here" power tool that was available when Windows 95 shipped.

We start by opening the Tools dialog; **Tools | Customize Menu Sets/Tools** and select the **Tools** tab to show the basic dialog.

The first task is to add a menu entry for the new tool, so click the ✳ button (top of the right-hand column of buttons). The "-- end --" marker will move down and an edit field appear in row 1. Enter the text "DOS Here" and press the **Enter** key to complete menu text editing. The cursor moves to the **Command** entry field automatically.

In the **Command** field you enter the name of the *.exe*, *.bat* or *.cmd* file to run when the tool is invoked. Windows 9x users should enter "command.com", NT/2000/XP users should enter "cmd.exe". Optionally you can browse to the program to run using the … button to the right of the field. We are not going to modify the actual program to run based on any view selection, so we can ignore the keyword selection.

Similarly we have no need of arguments to pass to the tool so leave the **Arguments:** field blank and click on the **Startup folder:** field. In this field we are going to specify a keyword representing the current workset folder selected in the view, so click on the keyword selection button ▶ and navigate down to the *WorksetFolder* keyword. This keyword supports filters but in this case we're not interested in them, so on the sub-list of filters, select the *<unfiltered text>* option. The **Startup folder:** entry field should now contain the text "$(WorksetFolder)".

To complete the definition, press the **OK** button. (If you had more tools to define, you would simply press the ✳ ' button and start on the next tool. Your changes for the previous definition are stored automatically.)

To test the new tool, open the Workset Structure view for your current workset and navigate the tree on the left to a subfolder. Click on the **Tools** pulldown menu and select the "DOS Here"

entry that should have appeared at the foot of the menu. You should see a console window open with the folder set to the workset sub-folder selected in the view.

A Simple Walk-through: Column Set Save for Change Documents

This section presents a small walk-through example using column-name keywords to write data from a Change Document view to a file for consumption by a tool of your choosing. In addition the view type is passed on the command line so that the tool can verify that the incoming data has come from the view expected.

For this walk-through to work, an imaginary tool is used (that would be easy to write) called 'mytool.exe' that can process the command-line arguments we are going to supply. The first argument is a string containing the frame window name. The second argument is the name of a response file, prefixed by "@". The tool inspects the frame name and rejects any that have not come from a '*ChdocFrame*'. If the frame name is valid, it then opens the indicated file for reading in text mode and processes the selection data in some manner row by row. On completion it closes the file and deletes it.

Having displayed the **Tools** dialog, click the **New Tool** button (to the right of the tool list) and enter "MyTool" as the tools menu text (or some other suitable text). Now go to the **Command:** field and enter "mytool.exe" (without quotes). If *mytool.exe* cannot be found using the *PATH* environment variable, prefix it with a path as necessary, or set the startup folder to be the location of the tool.

Now go to the **Arguments:** field and enter the following, either manually or by using the drop-down helpers (note the space between parameters):

```
$(FrameName) $@[ID,Description,Status]
```

This will cause the first argument on the tool's command line to contain the unique internal view name and the second argument to be the "@"prefixed name of a temporary file containing the data.

Exit from the dialog and open a Change Document view. Select a number of rows and then pull down the **Tools** menu and select the *MyTool* entry. *MyTool.exe* will be started and presented with a command line something like:

```
ChdocFrame @c:\temp\pcc1b.tmp
```

(Obviously the temporary filename will probably be different.) "ChdocFrame" is the name of the window from which the data came. You can inspect this and reject the data if the window is not the one you expected. Within the file, we might see the following data (based on the Payroll sample and a particular set of selections):

```
"PAYROLL_CR_20","Update functional spec in line with
review comments","RAISED"

"PAYROLL_CR_7","reports fail for HP deskjet","REJECTED"

"PAYROLL_IRR_2","Review comments on functional
spec","INCORPORATED"
```

Glossary

action

To move a Dimensions *object,* such as an *item*, *change document*, or *lifecycle*, to another *lifecycle state*. Only a *user* with the appropriate *role* for a state can action the item to another state.

Administration Console

A *Dimensions* tool for setting up the *process model* and creating *products*. For more information, see the *Process Modeling User's Guide*.

ancestor

The base *project* to which other projects, called *derivatives*, are compared in the *Project Merge Tool*.

The base file to which other *derivative* files are compared in the *Serena ChangeMan merge tool*.

archive baseline

A restricted variant of a *release baseline*. Archive baselines use a *baseline template* that includes all of the *revisions* of the *item types*.

Use the archive baseline to preserve the product at a milestone using Dimensions ART. For more information on Dimensions ART, see the *Distributed Development Guide*.

attribute

A property of an *object* that records important configuration information such as creation date, owner, status, description, and the user who last updated the object. See also *user-defined attributes*.

authentication

A requirement for the user to confirm their password before they can perform certain actions on an *object*. The user is presented with a confirmation dialog box if they attempt to update an object's lifecycle state or attribute that is specified as *sensitive*.

base database The area of the *Dimensions database* that pertains to a specific *product*. Each base database has a separate database schema, *Tool Manager*, and *process model*. Products in different base databases cannot reference each other.

baseline A snapshot of a *design part* or a *workset* at a particular time. Baselines ensure that the design parts and *items* included in the baseline can be reliably recreated in the future. For example, you might create a baseline before starting a maintenance cycle or assigning further development activities. See also *design baseline, release baseline*, and *archive baseline*.

baselines pedigree See *pedigree*.

baseline template A set of rules that determine which *items* to include or exclude in a *release baseline* or an *archive baseline* based on the item type, revision, status, and relationships. There are two types of baseline template:

■ An item baseline template consists a list of a list of criteria relating to item types which is used to construct the baseline.

■ A change document baseline template contains a list of criteria for selecting change documents whose related items are used to construct the baseline.

Baseline templates are defined in the Administration Console. For more information, see the *Process Modeling User's Guide*.

baseline type An attribute of a baseline that determines which user-defined attributes and lifecycle are used for the baseline.

Baseline types are defined in the Administration Console. For more information, see the *Process Modeling User's Guide*.

batch mode A method of running a group of Dimensions commands together as a script—for example, by running a *command file*.

branch   A chain of item *revisions* that follows its own update path. Branches allow product versions to be developed in parallel. For example, a software product might have separate branches for concurrent development of a Windows NT and a maintenance version of the product. Branches can be *merged* back into the main development path.

breakdown relationship   The component relationship of a *design part*. The component design part can be thought of as a child, while the design part that includes it is the parent. See also *usage relationship*.

build   To use ChangeMan Build to process one or more *item revisions* into some other form, which can be anything from a single item revision, such as an executable file, to an entire product.

catalog list   See *Primary Catalog list*.

category   See *change document category* and *design part category*.

change document   An *object* used to report a defect, suggest an enhancement, or detail other work for a particular *product*. Change documents can include external files (such as requirements or specification documents) as attachments.

                      Each *change document type* has a *lifecycle* assigned to it which determines which *users* may work on the change document at each step in the *process model*.

change document category   One of four groups into which *change document types* are assigned. Each category has its own set of *user-defined attributes*.

change document type   An *attribute* of a *change document* that classifies the change described, and indicates the general purpose of the change document. Valid types are defined by the *Product Manager* as part of the *process model*. A change document's type determines which *lifecycle* it follows.

Change Manager   A Dimensions-defined *role* for the *user* who has special authority and privileges in the handling of *change documents*.

check in   To return an item that has been *checked out* to the *Dimensions database*.

check out   To extract an *item* from the *Dimensions database* so you can work on it. When you check out an item, Dimensions creates a new *item revision* and places it in your *working directory*. The revision is locked in Dimensions so no one else can change it. When you finish working with it, you *check in* the item.

command   A *Dimensions* function followed by parameters and qualifiers. For more information, see the *Command-Line Reference Guide*.

command file   A text file whose contents include one or more Dimensions *commands*. You can run a command file in *batch mode* using the Dimensions `CMD` command. For more information, see the *Command-Line Reference Guide.*

command mode   A method for using Dimensions *commands*. Command mode involves entering Dimensions functions at the operating system prompt, in the Dimensions Execute Command dialog box, or running a *command file*. For more information, see the *Command-Line Reference Guide*.

configuration   The structure of *design part*s in a *product*, or a part of that design structure.

configuration file   A text file used to control *merge* options when starting the *Project Merge Tool* from the command line.

content window   In the *desktop client*, an area of the screen that displays lists of *objects*. For example, the Change Document Catalog window shows all *change documents* in a product. A content window can be opened, closed, and minimized, and you can switch between open content windows.

content area   In the *web client*, an area of the screen that displays lists of *objects*. For example, on the Pending tab, the content area shows the *items*, *change documents*, and *baselines* that are assigned to you.

console window   In the *desktop client*, a window that shows *Dimensions commands* and the results of those commands. You can type commands directly into the console window.

custom list   A list of *change documents* that you can create for your own purposes. For example, you can construct a user list of those change documents on which you are currently working.

customer   The recipient of one or more *releases*.

delegate
- To transfer responsibility for a *change document*, *item*, or *baseline* from yourself to another *user* who does not currently have a *role* for the object. Delegating an object overrides the normal role assignments made through the *design structure*.
- To assign a particular role to a user.
- To assign the *owning site* of a change document to another Dimensions replication site.

delta release   A *release* that includes only the *items* that have changed since the previous release.

derivative   One of any number of *projects* being compared to the *ancestor* in the *Project Merge Tool*.

One of any number of files being compared to the *ancestor* in the *Serena ChangeMan merge tool*.

design baseline   A snapshot of the current product *design structure*, or a selected portion of it, within the scope of the current *workset* or *design part*, including all the *revisions* for each *item*.

Design baselines provide managers with audit capabilities. You can compare two baselines to see how the product workset has

developed during the period between them. Developers can continue to modify items included in a design baseline.

design part   A logical component of a *product*. Design parts are related groupings of *objects,* such as modules of code, specifications, and change documents. Each design part represents a conceptual component of the *design structure* of the product. See also *top-level design part*.

design part category   An *attribute* of a *design part* that indicates its general purpose. All *user lists* of a design part have the same category. Categories are defined as part of the *process model*. For more information, see the *Process Modeling User's Guide*.

design structure   The hierarchical structure that identifies the *design parts* of a *product* and the relationships between them. See also *breakdown relationship* and *usage relationship*.

desktop client   A Microsoft Windows-based application that you use to access the *Dimensions database*. This has also been known as PC Client.

Dimensions   A comprehensive software configuration management (SCM) system which provides an integrated set of tools to manage software modules from initial concept through design, implementation, testing, baselining, build, release, and maintenance.

Dimensions database   The set of files that contain *Dimensions* data in a structured relational format.

Display bar   The navigation area in the *desktop client* that enables you to open various *content window*s.

Dimensions System Administrator   The *user* responsible for creating, deleting, and maintaining the *Dimensions database* as well as other administrative tasks.

directory item   An entire directory, including subdirectories and files, that is compressed and stored in *Dimensions* as a single *item*. A directory item is uncompressed when you *check out* or *get* a copy of it in your *working directory*.

filter   A set of search criteria which you use to locate and display matching *objects*. Filters are saved under a name so they're easy to reuse.

format   See *item format.*

format template   A text file that defines the initial content of an *item* or a *change document* that is created without content. Item format templates can include *header substitution variables*.

function   See *command*.

get   To extract a copy of an *item revision* from the *Dimensions database* so you can view it without *checking it out*. When you get an item revision, Dimensions leaves the revision in its current state (checked in or checked out) and creates a read-only copy in your *working directory.*

global workset   The *workset* that contains all other worksets in a *product*. The global workset is named $GENERIC:$GLOBAL and cannot be deleted. A *user* assigned to the global workset can reference any item revision in any product in the base database to which they are connected.

header substitution variables   Placeholders for text in an *item* that are ed dynamically when you *check out*, *get*, or preview an item. Header substitution variables must be placed within an item header. You can embed multiple headers anywhere in a file.

Held list   The list of *change documents* that you have created but not yet submitted because you are still working on them. An example is a change document that requires a yet-to-be-created screenshot.

item   An *object* that represents the physical implementation of a *product* component. An item could be source code, an executable file, a document, or an image file. Items can also represent data that does not reside in the file system, such as hardware or database objects.

item format   An *attribute* associated with an *item type* in the *process model* that indicates the internal structure of those items. The item format determines how *items* of that type are processed during a *build*. In the *web client*, the item format sets the MIME type for the item, which determines how item content is displayed in your web browser.

item ID   An attribute that identifies an *item*. The item ID may be automatically generated from the *item type* and item *workset filename*, or it may be typed in when the item is created.

                          The same item ID may be used for a "family" of items whose contents have the same origin, but that may serve different purposes (different *item types*), and/or exist to meet different requirements (different *user lists*), and/or be at a different stage of modification (different *revisions*).

item library   A directory that holds the data files for one or more *item types*.

item pedigree   See *pedigree*.

item revision   A specific instance of an *item*. Whenever you modify an item, a new item revision is created and stored in the *Dimensions database*. Each revision has a full set of *attributes*, such as modification date, reason for change, and author's name, so you can trace the history of all changes to an item. Revisions are numbered according to the *process model*.

item specification   The unique identifier for an *item*. Item specifications have the following form:

                          productID:*itemID*.*variant*-*itemType*;*revision*

- The *productID* is the *product ID* that contains the item.

- The *itemID* is the *item ID*.

- The *variant* identifies that this is a *user list* of another item.

- The *itemType* identifies the *item type*.

- The *revision* is an incremented number, indicating the *version* of the item, and a *branch* name, if it exists.

item type   An *attribute* of an *item* that indicates the general purpose of that category of item. For example, item types can include source files, documentation files, specifications, or object files.

leader   An *attribute* of a *role* that gives the holder *permissions* and responsibilities above those of other users of the same *role*. The leader attribute is set up in the *Administration Console*. For more information, see the *Process Modeling User's Guide*.

lifecycle   The set of *states* and rules for transitions between states defined for a particular *object* type and *design part* in the *process model*.

login profile   The login details for your connection to the *Dimensions database*, including your *user* ID and the database name.

main catalog   See *primary catalog*.

merge   To view the differences and resolve the conflicts between two text *items* (using the *Serena ChangeMan merge tool*) or projects (using the *Project Merge Tool*), with the result being a single item or project.

merged baseline   The composite of two or more *release baselines*, merged baselines, or *revised baselines* and the selected *design part*.

merge tool   See *Serena ChangeMan merge tool*.

object	A term used to refer collectively to these object types: *design parts*, *items*, *change documents*, *worksets*, *baselines*, *releases*, and *customers*.
object list	A list of *objects* presented in table form.
object tree	A tree view of a hierarchical *object*. Dimensions displays the *workset* structure and the *design structure* of a *product* in an object tree.
Originator	The creator of a Dimensions *object*. The *role* of $ORIGINATOR is automatically assigned to the creator of a Dimensions object for the duration of its *lifecycle*. This role may be authorized to *action* the object.
Owned	The relationship of an *item* to the *design part* selected when it was created or moved. All *revisions* of the item have this relationship to the same design part.
owning site	The replication site that has ownership of a *change document* when there is replication of change documents between Dimensions base databases. The site that owns the change document is able to update it, whereas other sites can only view its details.
part	Same as *design part*.
part category	Same as *design part category*.
part change status	The field in the *part specification* that identifies the modification level of the *design part*. Previous versions of the design part are Closed. Only the latest version has the Open *part status*.
part ID	See *part specification*.
part specification	The unique identifier for a *design part*. Design part specifications have the following form:

productID:*partID*.*variant*;*pcs*

■   The *productID* is assigned when the *product* is created.

■   The *partID* is the name you give the part. It is the most
    significant component of the specification.

■   Use *variant* to identify that this is a *user list* of another design
    part.

■   The *pcs* (*part change status*) indicates the modification level
    of the design part.

part status   An *attribute* that contains the current *part change status* of the
                    design part. A design part can be Open, Closed, or Suspended.

PC Client   Another name that has been used for the *desktop client*.

PCS   See *part change status*.

pedigree   A graphical representation of the history of an *item*, *workset*, or
                    baseline. The pedigree shows how *objects* are related in time and
                    origin.

Pending list   A list of the *items*, *change documents*, and *baselines* that are
                    assigned to you for *action*.

permissions   The ability to perform certain tasks and use certain options in
                    Dimensions based on each *user's role*.

phase   A grouping of the *lifecycle states* for a *change document type*.
                    The phase of the current *status* of a *change document* determines
                    what kinds of *relationships* may be established to it.

**primary   The storage area for active *change documents*. Change
catalog**   documents that become inactive may be moved to the *secondary
                    catalog* by the *Change Manager*.

**Primary   The list of all active *change documents* to which you have access.
Catalog list**

prime	To create a new *change document* based on an existing change document.
process model	The set of *lifecycles* which define the development process for different object types, and which *roles* can move them to the next stage.
	The process model is defined in the *Administration Console* to reflect the organization's development processes and standards. For more information, see the *Process Modeling User's Guide.*
product	The top-level *object* type which provides the context for managing development with *Dimensions*. Every object belongs to a product. The *design structure* of a product is modeled as a set of related *design parts*.
product ID	An *attribute* that uniquely identifies a *product*.
Product Manager	A *Dimensions*-defined *role* for the *user* who has special authority and *permissions* in setting up the *process model* rules for an individual *product* and managing the development process.
project	A set of *item revisions* in a *workset*, *baseline*, or directory that you want to compare or *merge*.
Project Merge Tool	A *Dimensions* tool that enables you to compare or *merge projects.* When you compare projects, you view the differences between two projects. When you merge projects, you view the differences between two or more projects and resolve the conflicts, with the result being a single project.
relationship	An association between two *objects*. Each object type has a set of possible relationships with other object types. You can unrelate items, if necessary, depending on the type of relationship and the *state* the item is in.
	For example, relationships record whether an item is affected by a change document, which items are used to build another item, and which items belong to a baseline.

Some relationship types are system-defined, while others are user-defined. The *Product Manager* can set up user-defined relationship types in the *process model*.

release	A snapshot of a *design structure* or a *baseline* which you can deliver to a customer or use in integration testing. See also *delta release*.
release baseline	A snapshot of a *design structure* or a *workset* at a particular time. You create a release baseline to define and build a test or release of the product. A release baseline uses a *baseline template* to select a single version of each *item* that matches the criteria in the template. Dimensions locks the design parts and items included in the release baseline.
release directory	A file system directory, external to the *Dimensions database*, that contains copies of all the *items* in a *release*.
release template	A set of rules for selecting which parts of the *design structure* and *item types* to include in a *release*, and which *release directory* to put them in.
	Release templates are created in the *Administration Console*. For more information, see the *Process Modeling User's Guide*.
remote node	A computer on your network that contains files and directories that you can access.
revised baseline	A *release baseline* that is modified in response to *change documents*. Depending on the *relationships* of *item revisions* to *change document*s, items may be removed, replaced or added.
revision	See *item revision*.
role	A name, such as Developer or Reviewer, that identifies *user*s with similar project responsibilities. Roles are used in *lifecycles* to grant *permissions* to *action objects*. Roles are assigned to users

according to the object's place in the *design structure* and the user's project responsibilities.

Some roles are built into Dimensions, while others are user-defined. Roles are created and assigned in the *Administration Console*. For more information, see the *Process Modeling User's Guide*.

role section A set of *attributes* that are relevant to users with a particular *role*. Role sections are not restricted to users with that role; they are simply a way of reducing the list of attributes for an *object*.

root directory See *workset root directory*.

secondary catalog The storage area for inactive *change documents*. If you are the *Change Manager*, you can move change documents from the *primary catalog* to the *secondary catalog* in order to save space and improve the performance of the primary catalog. Once placed in the secondary catalog, a change document can't be updated. Change documents can be moved back to the primary catalog.

Secondary Catalog list The list of all *change documents* placed in the *secondary catalog* by the *Change Manager*.

sensitive A condition of a *lifecycle state* of an object such that user *authentication* is required before it can be *action*ed to that state.

A condition of an *attribute* of an *object* such that user *authentication* is required before it can be updated.

Serena ChangeMan merge tool A tool that enables you to compare or *merge* text *items.* Also previously known as the PVCS Merge Tool.

state A node in a *lifecycle*.

status An *attribute* of an *item*, *change document, or baseline* whose value is the current *lifecycle state* of that *object*.

substitution variable   See *header substitution variables*.

suspend   To remove a *design part* or *item* from further use. The *object* remains in the *Dimensions database* for existing *configurations* and *baselines* that include that design part or item.

target   The *project* that results after you *merge* two or more projects. The file that results after you have *merged* two or more files*.* See also *ancestor* and *derivative*.

template   A file or set of rules that controls an *object* in Dimensions. See *format template*, *baseline template*, and *release template*.

Tool Manager   A *Dimensions*-defined *role* for the *user* who has overall responsibilities for a Dimensions base database, such as defining users, creating *products*, and assigning *Product Managers*.

top-level design part   The topmost *design part* of a *product*. It is created when the product is defined. For more information, see the *Process Modeling User's Guide*.

upload rules   The rules for uploading files from a directory outside of the *Dimensions database* and saving them in a *workset*. These rules determine the *design part*, *item format*, and *item type* for these new *items*. For more information, see the *Development Interface Implementation Guide*.

usage relationship   The relationship between *design parts* that are re-used in the *design structure*. See also *breakdown relationship*.

user   A member of the project team who has been authorized and given *permissions* to use *Dimensions*.

user area   See *working directory*.

user-defined attributes   A set of *attributes* that can be defined to collect custom information for different *object* types. User-defined attributes

can be used to customize the layout of *change documents* by including them in *format templates*.

user list   See *custom list.*

variant   An alternative implementations of a *design part* or *item*, usually to meet different standards or customer requirements. Variants are identified by a field in the *part specification* of an *item specification*

version   A general term for an *item revision*, or for the *part change status* of a *design part*.

web client   A web-based application that enables you to use a web browser to access the *Dimensions database*.

work area/ working area   See *working directory*.

working directory   A directory on your local hard drive, on a *remote node*, or on a network drive that you use to *check out*, *check in*, *get*, and add *items*.

workset   A workset is a collection of item revisions that are relevant to a development activity.

workset directory   A folder in the *workset* structure that contains *items*.

workset filename   A name that identifies an *item* within a *workset*. The workset filename may or may not be the same as the actual filename of the item. Also, different worksets may refer to the same item using different workset filenames.

Workset Manager   A *Dimensions*-defined *role* for the *user* who has special authority and privileges in the handling of worksets. The Workset Manager sets up and maintains the *workset directory* structure, adds or

deletes *items*, sets the workset options that regulate how users work within worksets, and locks worksets to create *baselines*.

workset
pedigree

See *pedigree*.

workset root
directory

The top-level directory in the *workset directory* that is assigned to a *workset*. A workset root directory can be on your local hard drive, on a remote node, or on a network drive.

The workset root directory is used mainly to construct default filenames when getting or checking out items. These filenames are generated by appending the workset file path to the workset root directory—for example:

```
workset root dir\workset_file_path
```

Index

finding
   objects 103
   saving search criteria 103
flags, workset 271
font
   changing in file merge 367
format templates 521
format, item file 213
full screen view 93
functions, see *command*

G

get
   overwriting files 457
getting 521
getting items 209
Global Comparison window 363
   displaying 367
global workset 27, 521

H

header substitution variables 212, 214, 521
Held list 125, 521
   adding change documents to 130
history
   baseline 304
   change document 168
   item 210, 211
   object 114
   worksets 288

I

I-Net, see *web client*
initial views, customizing 487

installing the web client applet 61
integrated development environments
         (IDEs) 24, 46
Internet Explorer 62
ISO 9000
   and baselines 29
item
   placeholder 199
   renaming 227
   virtual 199
Item Catalog window 90
item format 522
   templates 212
item libraries 49, 522
item revisions 199, 233, 245, 249, 522
   see also *items*
   branches 202
   conflicting 283
   editing 218, 225
   getting 209
   merging 54
   removing from a workset 280
   resolving conflicting 284
   revision IDs 202
   status when comparing projects 388
   suspending 234
item types 49
items 30, 199, 229, 522
   see also *item revisions*
   actioning 48
   actioning baseline 310
   attributes 226
   basic tasks 200
   building 422
   checking in 47, 223
   checking out 221
   creating 47, 212, 215
   delegating 231
   directory 30, 521
   directory items 199
   editing 46, 218, 225
   exporting to a workset 281
   file format 213
   getting 209

K

L

M

Z